

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[PRICE 6D.

SINKERS WANTED, at the SNIBSTON COLLIERIES,
near Ashby-de-la-Zouch, to sink TWO SHAFTS, each to the depth of 200 yards.
—Applications to be made to Mr. Vaughan, at Snibston.

TO BE SOLD.—ONE HIGH-PRESSURE STEAM-ENGINE, of 40-horse power, calculated at 30 lbs. pressure to the inch. This engine is quite new, and very strongly built, having been intended for driving heavy machinery, and is not now required.—For particulars apply to Mr. Matthew Smith, No. 26, Button-lane, Sheffield.

TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, ONE 36-inch PUMPING-ENGINE, 6 feet stroke, equal beam, boiler, 8 tons, balance-bob, and first place of rod.
ONE 24-inch STEAMING-ENGINE, 8 feet stroke, boiler, 11 tons.
ONE 24-inch STEAMING-ENGINE, 6 feet stroke, boiler, 7 tons, and cage.
ONE 18-inch WHIM-ENGINE, 4 feet stroke, boiler, 7 tons, and cage.
 Application to be made to Capt. R. Williams, on the mines.
 Dated Godolphin Mines, Helston, Cornwall, May 37, 1847.

ON SALE, BY PRIVATE CONTRACT, at the PROVIDENCE MINES, near ST. IVES, an excellent 30-inch cylinder STEAM PUMPING-ENGINE, with boiler, about 7 tons.—For duty performed, see *Leans's Reporter*, 1844 and 1845.

50 Fathoms 9-inch PUMPS, 30 fathoms 8-inch ditto, and other sizes.
1 11-inch doorpiece, 1 8-inch ditto.
1 8-inch working barrel, 1 6½-inch ditto.

Rod-plates, fend-off bobs, rod-shieves, whim-shieves, shaft rollers, bucket-door, windrods, and a variety of other articles.

Apply to Capt. Tenbury, on the mines; or Samuel Higgs and Son, Penzance.

Dated March 19, 1847.

INCrustATION IN STEAM-BOILERS PREVENTED.
Whether arising from saline or earthy ingredients, by LAMB'S SCALE PREVENTER, which has been successfully applied to STEAM-BOILERS by the following makers—Maudslay and Field, Miller and Ravelhill, J. Penn and Son, Bury, Curtis, and Kennedy, Tod and Macgregor, &c.—any of whom can speak as to its efficiency. The apparatus is simple and inexpensive, and can be readily applied to any boiler.
Apply to J. CURRIE, Sole Agent for the Patentee, 11, Savage-Garden, London, W.C.

STEAM-ENGINES.—JAMES CURRIE, ENGINEER.
No. 11, SAVAGE-GARDENS, has HIGH-PRESSURE ENGINES constantly
ON SALE. The following TABLE ENGINES may be SEEN on application :—
One of 34 inches diameter of cylinder, and 18 inches stroke, and 13 inches
and 24 inches stroke, and two of 12 inches diameter, and 24 inches stroke.
OSCILLATING ENGINES, on an improved plan, at £10 per horse power.
SOLE AGENT FOR LAMB'S SCALE PREVENTER, FOR PREVENTING
INCrustation IN BOILERS.

PIG-IRON.—**JAMES BANKS AND CO.** have always FOR SALE SCOTCH PIG-IRON, deliverable, free on board, at the Broomielaw, Port-Dundas, Ardrossan, and in the Frith of Forth, at Charleston. Glasgow. 21, Renfield-street.

WILSON & FRASER, 2, WELLINGTON-BUILDINGS,
LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE
PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

**JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND
SHAREBROKER,
MATTHEW-STREET, TAVISTOCK.**

JOHN TREGONING, MINE SHARES COMMISSION

WILLIAM H. SMITH, MINING SHARE AGENT
10, WYATFORD-COURT, THROGMORTON-STREET, LONDON.

WATSON AND CUELL, MINE AGENTS.
N.B.—STATISTICAL INFORMATION furnished (on application) to SHARE-
HOLDERS IN MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain.

THOMAS P. THOMAS, MINE AGENT, AND DEALER
IN RAILWAY AND OTHER SHARES.
18, THREADNEEDLE-STREET, LONDON.

MR. R. TREDINNICK, MINING AGENT AND DEALER
IN EVERY DESCRIPTION OF SHARES.
THREE KING'S COURT, LOMBARD-STREET, LONDON.

MESSRS. WINSTANLY AND CO., SHAREBROKERS
 inform their friends and the public, they BUY and SELL every description of
RAILWAY SHARES on the most advantageous terms; they also make advances upon
 the deposit of scrip and shares for periods as may be agreed.
 6, Bank Chambers, City.

JAMES LANE, MINING SHARE DEALER
78, OLD BROAD-STREET, LONDON.

RHYMNEY IRON COMPANY.—The directors give Notice to the HOLDERS of (£15 share) SCRIP CERTIFICATES of this company, that the SECOND INSTALMENT of THREE POUNDS per share is hereby CALLED for and PAYABLE to Messrs. Glyn, Halifax, Mills, and Co., Lombard-street, on Saturday the 19th inst.

THOMAS WILSON, Chairman.

Laurence Pountney-hill, June 1, 1847.

RHYMNEY IRON COMPANY.—The next MEETING of the proprietors of the Rhymney Iron Company, upon the general business of the company, will be HELD at the company's office, 7, Laurence Pountney-hill, on Thursday, the 34th inst. J. E. SCUDAMORE, Secretary.
Laurence Pountney-hill, June 1, 1847.

NATIONAL BRAZILIAN MINING ASSOCIATION.
Notice is hereby given, that the **LAST DAY** for the **PAYMENT** of the **SECOND**
INSTALMENT of **ONE POUND** per share, on the **Marked Shares** of this association, is
fixed for **TUESDAY, the 9th June.** By order.
26, Throgmorton-street, May 26, 1847.

S. J. JOHN DEL REY MINING COMPANY.—The SEVENTEENTH ANNUAL GENERAL MEETING of the proprietors of the St. John del Rey Mining Company will be HELD at the company's offices, 8, Tokenhouse-yard, Lothbury, on Friday, the 11th of June, at Two o'clock precisely. At this meeting one director-viz., Edward Hurry, Esq., will go out by rotation, but is eligible to be re-elected. 8, Tokenhouse-yard, Lothbury, May 31, 1847. GEO. D. KEOGH, Secretary.

UNITED HILLS MINE COMPANY.—The directors hereby give Notice, that the ANNUAL GENERAL MEETING of the shareholders of this company will be HELD at their office on Thursday, the 10th day of June next, at one o'clock, to receive the accounts of the directors and of the agents in Cornwall; and to elect one director, in the room of Mr. Tye, and one auditor, in the room of Mr. Faith, who go out by rotation, but are re-eligible.

By order of the board,
5, Adam's-court, Broad-street, May 20, 1847.

JAMES SMITH, Secretary.

WHEAL CURTIS COPPER MINING COMPANY.
Notice is hereby given, that, at a General Meeting of the shareholders, held on the 18th inst., pursuant to advertisement, the DEED OF SETTLEMENT was adopted, and a CALL of TEN SHILLINGS per share made, and that such call be PAID within 21 days from the 18th inst., to Messrs. Cunliffe and Co., bankers, 24, Lombard-street, London, and Notice is also given, that the said Deed of Settlement is now open for inspection at the said bankers' office, from 10 o'clock to 4 o'clock, on every day except Sunday and public holidays.

London; and reduce is also given, that the share of settlement now has no execution by the shareholders, at the offices of the company, Gresham House, Basinghall-street, and will there remain until Saturday, the 12th of June next, between the hours of Eleven and Three.

By order of the board,
GEO. A. JACOB, Secretary

Dated this 24th day of May, 1847.

WHEAL SOPHIA MINE LEZANT CORNWALL

Notice is hereby given, that a SPECIAL MEETING of the shareholders of the above mine will be HELD at the Catherine Wheel Inn, Little St James's-street, St. James's, London, on Monday, the 7th day of June next, at Three o'clock P.M., for the purpose of examining the lease, auditing the accounts, and other business.

Dated Upputon, Milton Abbot, May 28, 1847. D. WARD, Purveyor.

WHEAL TELAWNEY MINE, LISKEARD.—Captain PETER CLYMO, Jun., having RESIGNED his SITUATION, as Manager and Purser of the above mine, applications and testimonials for a person to fill the above offices, will be received by him until the 19th of June next, shortly after which the person selected will have due notice thereof. None need apply who are not thoroughly acquainted with the practical part of mining.

Dated, Treilawney Mine, Liskeard, May 19, 1847.

Transactions of Scientific Bodies.

Proceedings of Public Companies.

IMPROVED LIFTING JACKS.

MANUFACTURED BY

GALLOWAYS AND CO.

KNOTT MILL,

MANCHESTER.

The attention of parties who employ

Lifting Jacks,

is respectfully requested to the super-

iority of those annexed, over those

hitherto in use.

IMPROVED RATCHET JACK.

HALL'S PATENT

LIFTING JACK.

MANUFACTURED BY

GALLOWAYS AND CO.

KNOTT MILL,

MANCHESTER.

The attention of parties who employ

Lifting Jacks,

is respectfully requested to the super-

iority of those annexed, over those

hitherto in use.

IMPORTANT TO RAILWAY COMPANIES.

PATENT KAMPTULICON COMPANY, 18, CORNHILL.

This company having completed their new factory, are prepared to supply railway

managers and contractors with an elastic material (perfectly non-absorbent) to place

between the rails and sleepers, and between the frames and bodies of carriages, to prevent

jarring, and, consequently, wear and tear. The elastic planking is strongly recommended

to be used for the backs and sides of carriages, to prevent splinters when accidents occur.

By order of the board, P. G. GREVILLE, Secretary.

PROJECTED RAILWAYS.

PATENT METALLIC SAND, OR ENGLISH POZZOLANO.

Extensively used in mortar and concrete at the great tunnels on the London and

Birmingham Railway, in the foundations of the new Houses of Parliament, sea walls on

the South Devon Railway, Clifton Reservoirs, and other works of importance.

From its chemical qualities, the metallic sand forms, in admixture with lime and common

sand, a cement, mortar, or concrete, of flinty hardness, and almost entire incom-

pressibility; and, from its adhesive and impervious qualities, it completely and for ever

excludes water. The more it is exposed to the atmosphere, and to wet and damp, the

harder and more durable it becomes.

As an external stucco, the metallic sand cement is unaffected by frost or wet; in ap-

pearance it resembles the best Portland stone—requires, therefore, neither colour nor

paint, and is entirely free from vegetative cracks and blisters, to which Roman cement is

liable.—Further information will be given, and specimens shown, on application to

Messrs. K. D. & E. R. 4, New Broad-street, London.

ANALYSIS OF THE PATENT METALLIC SAND.

Silica 49 Lime 6

Oxide of iron 32 Magnesia 2

Alumina 8 Zinc 3

L. LEMONNIER, HAIR-WORKER to the Queen,

and Member of the Academie de l'Industrie, and who obtained

a Silver and Platinum Medal at the Exhibition, has just INVENTED

several NEW DESIGNS, as Palm Trees, Wreaths, Knots, and Cypresses,

which he executes with hair in its natural state, without using gum or

other cement. A variety of Trees executed by a mechanical process.

No. 13, RUE DU COQ SAINT HONORE, PARIS.

NO BREWING UTENSILS REQUIRED.

PATENT CONCENTRATED MALT AND HOP EXTRACT

enables PRIVATE INDIVIDUALS to MAKE

FINE HOME-BREWED ALE.

WITHOUT EMPLOYING ANY BREWING UTENSILS.—It has only to be dissolved in

hot-water and fermented.—Sold, in Jars, for medicinal and other purposes, at 1s. and

1s. 6d.; and in bottles for brewing 9 to 19 gallons and upwards of ale, at 6s. 6d. and

7s. 6d. each, by the

BRITISH NATIONAL MALT EXTRACT COMPANY,

7, NICHOLAS-LANE, LOMBARD-STREET; Petty, Wood, and Co., 53, Threadneedle-street;

Wix and Sons, 22, Leadenhall-street; Batty and Co., 15, Finsbury-pavement; De Castro

and Peach, 65, Piccadilly; Hockin and Co., 38, Duke-street, Manchester-square; and oil-

men and grocers generally.

Also, just published, and may be had gratis,

NATIONAL BREWING: A GUIDE TO THE USE OF CON-

CENTRATED MALT AND HOP EXTRACT, FOR BREWING AND WINE MAKING;

to which is added, MEDICAL OPINIONS relative to the virtues of malt and hops.

ON NERVOUS DEBILITY & GENERATIVE DISEASES.

—Just published, the Thirtieth Thousand, an improved edition, revised and

corrected, 130 pages, price 3s., in a sealed envelope, or forwarded, post-paid, to any address,

secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous ana-

tomical coloured engravings, "MANHOOD: the Causes of its Premature Decline, with

Plain Directions for its Perfect Restoration." A medical essay on those diseases of the

generative organs, emanating from solitary and sedentary habits, indiscriminate excesses,

the effects of climate, and infection, &c., addressed to the sufferer in Youth, Manhood,

and Old Age; with practical remarks on marriage—the treatment and cure of nervous

and mental debility, impotency, syphilis, and other venereal diseases, by which even

the most shattered constitution may be restored, and reach the full period of life allotted

to man. The whole illustrated with numerous anatomical engravings on steel, in colour,

explaining the various functions, secretions, and structure of the reproductive organs in

health and disease; with instructions for private correspondence, cases, &c.

By J. L. CURTIS and CO., Consulting Surgeons, 7, Firth-street, Soho-square, London.

REVIEWS OF THE WORK.—"Manhood: a medical work. To the gay and

thoughtless we trust this little work will serve as a beacon to warn them of the danger

attendant upon the too rash indulgence of the passions, whilst to some it may serve as

a monitor in the hour of temptation, and to the afflicted as a sure guide to health."—

Chronicle. "We feel no hesitation in saying, that there is no member of society by whom

the book will not be found useful—whether such person hold the relation of a parent, a

preceptor, or a clergyman."—Sun, Evening Paper. "Curtis on Manhood should be in

the hands of youth and old age. It is a medical publication, ably written, and develops

the treatment of a class of painful maladies which has too long been the prey of the

illiterate and the designing."—Daily Service Gazette.

Published by the authors, and may be had at their residence; sold also by Strange, 21,

Fleet-street; Hanny and Co., 63, Oxford-street; Mann, 39, Cornhill; London; A. Heywood,

Oldham-street, Manchester; Philip, South Castle-street, Liverpool; Campbell, 146,

Argyle-street, Glasgow; Robinson, 11, Greenisle-street, Edinburgh; and, in a sealed en-

velope, by all booksellers.—Messrs. Curtis and Co. are to be consulted daily at their re-

sidence, No. 7, Firth-street, Soho-square, London; and patients can have this work pri-

vately forwarded them, by initial or otherwise, to any part of the United Kingdom, direct

from the authors' residence; or from any of the above agents, on remitting 2s. 6d. in

postage stamps.

ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY.

With 25 coloured engravings.

Just published (in a sealed envelope), price 2s. 6d.; or post-paid to any address, 5s. 6d.,

in Post-office order or stamps.

SELF-PRESERVATION: A Medical Treatise, on Marriage, and

on those Secret Infirmities and Disorders of Youth and Maturity that are usually ac-

quired at an early period of life, which tend to destroy physical and mental energy, ar-

dour, passion, and all the vital powers. Illustrated with twenty-five coloured

engravings, on the anatomy, physiology, and diseases of the urinary and reproductive or-

gans, explaining their various structures, uses, and functions, and showing the injuries that

are produced in them, by solitary habits, excesses and infection. With practical ob-

servations on the treatment of nervous debility, local and constitutional weakness, syphilis,

stricture, and other diseases of the urethra. By SAMUEL LA'MERT, consulting sur-

geon, 9, Bedford-street, Bedford-square, London, Matriculated Member of the University

of Edinburgh, Honorary Member of the London Hospital Medical Society, Licentiate of

Apothecaries' Hall, London, &c.

REVIEWS OF THE WORK.—"The author of this singular and talented work is a legally qualified medical man, who

has evidently had considerable experience in the treatment of the various disorders, arising

from the folios and follies of early indiscretion. The engravings are an invaluable ad-

dition, by demonstrating the consequences of excesses, which must act as a salutary

warning to youth and maturity, and by its personal, many questions may be satisfactorily

replied to, that admit of no appeal, even to the most confidential friend."—Era.

"Unquestionably this is a most extraordinary and skilful work, and ought to be ex-

tensively circulated; for it is quite evident that there are peculiar habits acquired at pub-

lic schools and private seminaries, which are totally unknown and concealed from the

conductors of those establishments, and which cannot be too strongly reprobated and

condemned. The engravings that accompany the work are clear and explanatory; and

being written by a fully-qualified medical practitioner, will, doubtless, be the means of

saving many a youth, as well as those of mature age, from the various evils consequent

resulting from early indiscretions."—Argosy.

Published by the author; and may be had from Kent and Richards, 51 and 52, Patern-

oster-row; Hanny and Co., 63, Oxford-street; Starke, 23, Tichborne-street, Quadrant;

Gordon, 146, Leadenhall-street, London; Newton, 16, Church-street, Liverpool; and by

all booksellers.—At home for consultation daily, from nine till two, and from five till

eight; and all letters, immediately replied to, if containing the fee of £1, for advice, &c.

The work may be had direct from the author's residence, and will be forwarded, free by

post, to any address for 3s. 6d. in postage stamps.—9, Bedford-street, Bedford-square.

The Nineteenth Edition, price 2s. 6d.; free by post, 3s. 6d.

THE SILENT FRIEND: a medical work, on the concealed

cause of constitutional or acquired debility, loss of muscular energy, and derange-

ment of the generative system, nervous debility, constitutional weakness, excessive in-

dulgence, &c., with Observations on Marriage, &c. By R. and L. PERRY and CO., sur-

geons, London. Published by the authors, and sold at their residence; also by Strange,

21, Fleet-street; Hanny and Co., 63, Oxford-street; Noble, 109, Chancery-lane; Gor-

don, 146, Leadenhall-street; Fennell, Cornhill; Compston, Soho, London.

Part I. of this work is addressed to those who are prevented from forming a marital

alliance, and will be found an available introduction to the means of perfect and a se-

cure restoration to manhood.—Part II. treats upon those forms of disease, either in their

primary or secondary state, arising from infection—showing how numbers neglect to ob-

tain competent medical aid, until upon themselves years of misery and suffering.

The CORDIAL BALM OF SYRACUSE is a stimulant and restorative in all cases of con-

stitutional or acquired debility; by its use the whole system becomes restored to a healthy

state of organization. Sold in bottles, price 11s. and 23s.

THE CONCENTRATED DETENSIVE ESSENCE.—An anti-syphilitic remedy for

searching out and purifying the blood from venereal contamination, scurvy, blotches on the

head, face, and body, ulcerations, and those painful affections arising from improper treat-

ment, or the effects of mercury, or secondary symptoms. Price 11s. and 23s. per bottle;

also 45s. cases.

PERRY'S PURIFYING SPECIFIC PILLS are perfectly free from mercury, calomel,

and other dangerous drugs, and may be taken with safety without interference with

loss of time from business, and may be relied upon in every instance. Sold in boxes, at

3s. 6d., 4s. 6d., and 11s. each, by all medicines vendors—of whom may be had the Silent

Friend.—Messrs. R. and L. Perry and Co. may be consulted at No. 19, Berners-street,

Oxford-street, London, daily.

MEETINGS DURING THE ENSUING WEEK.

Society.	Address.	Day.	Hour.
Asiatic	14, Grafton-street	Saturday	2 P.M.
Western Scientific Institut.	Leicester-square	Monday	8 P.M.
Entomological	71, Old Broad-street	Monday	8 P.M.
Pathological	21, Regent-st.	Monday	8 P.M.
Medical and Chirurgical	52, Berners-street	Tuesday	8 P.M.
Civil Engineers	26, Great George-street	Tuesday	8 P.M.
Zoological	11, Hanover-square	Tuesday	8 P.M.
Syrio-Egyptian	71, Mortimer-st.	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	8 P.M.
Geological	Somerset-house	Wednesday	8 P.M.
Pharmacological	17, Bloomsbury-square	Wednesday	9 P.M.
Rhetorical	27, Sackville-street	Wednesday	8 P.M.
Literary Fund	73, Great Russell-street	Wednesday	3 P.M.
Royal	Somerset-house	Thursday	4 P.M.
Antiquaries	Somerset-house	Thursday	4 P.M.
Royal Society of Literature	4, St. Martin's-place	Thursday	4 P.M.
Medico-Botanical	32, Sackville-street	Thursday	4 P.M.
Astronomical	Somerset-house	Friday	8 P.M.
Philosophical	London Circle, 19, St. James's	Friday	7 P.M.
Royal Botanic	Inner Circle, Regent's-park	Saturday	3 P.M.

INSTITUTION OF CIVIL ENGINEERS.

PRESIDENT'S CONVERSATIONS.

Sir John Rennie (President of the Institution) gave his first conversations this season, on Saturday evening, which was both numerously and brilliantly attended by the members of the institution and by visitors, who appeared to be alike delighted with the intellectual treat provided for them in the extensive collection of works of science and art, arranged in the suit of apartments, and with the host's generous hospitality, as displayed in the refreshment rooms.

It would be impossible to enumerate all the objects of interest in the works of art or models of machinery exhibited; we must, therefore, restrict our notice to some of the most prominent.

Count D'Orsay contributed some spirited statuettes and busts of the Emperor of Russia, Daniel O'Connell, the Duke of Wellington, &c., which were deservedly much admired. Paintings and sketches by Oliver, Bus, Wood, Scanlan, Digby, Wyatt, and Ward; enamel paintings, by Bone; chalk drawings, from Mr. Fuller; and some beautiful sketches, from Messrs. Ackerman's collection, were profusely scattered through the rooms. Taylor, Williams, and Jordan, had some excellent specimens of machine carvings; and Mr. Rogers some delicate examples of hand carving.

A curious specimen of laminated granite, from Dartmoor, contributed by Mr. Freeman, appeared to excite much interest among the geologists.

The collection of models was more extensive than we ever remember to have seen it, and as the whole of the ground-floor was devoted to their reception, there was ample space for displaying them to advantage.

A series of models from the Admiralty exhibited the construction of a 50-gun ship at various epochs of the machinery exhibited; we must, therefore, restrict our notice to some of the most prominent.

Count D'Orsay contributed some spirited statuettes and busts of the Emperor of Russia, Daniel O'Connell, the Duke of Wellington, &c., which were deservedly much admired. Paintings and sketches by Oliver, Bus, Wood, Scanlan, Digby, Wyatt, and Ward; enamel paintings, by Bone; chalk drawings, from Mr. Fuller; and some beautiful sketches, from Messrs. Ackerman's collection, were profusely scattered through the rooms. Taylor, Williams, and Jordan, had some excellent specimens of machine carvings; and Mr. Rogers some delicate examples of hand carving.

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A curious specimen of laminated granite, from Dartmoor, contributed by Mr. Freeman, appeared to excite much interest among the geologists.

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Law Intelligence.

THE COST-BOOK SYSTEM—SOUTH WHEAL FRANCIS.
Duchy of Cornwall Court.

His Royal Highness Prince Albert, in virtue of his office of Warden of the Duchy of Cornwall, held a Court on Saturday, in the council chamber of the Privy Council Office. Besides his Royal Highness, the Court consisted of the Lord Chancellor, Lord Lyndhurst, and Mr. Pemberton Leigh. The case under consideration was that of *REYNOLDS v. BASSETT*.—Mr. Bacon (with whom was Mr. Nicholson) appeared for the appellants; and Bethell (with whom was Mr. Follett and Mr. Montague Smith) for the defendant. This was an appeal from the decision of the Vice-Warden in the Stannaries Court, on the petition of Elizabeth May Bassett, the representative of J. Bassett, claiming the property of 16 shares in South Wheal Francis Mine, in the Duchy of Cornwall. From the statements of counsel, it appeared that the property in question belonged originally to Mr. Wm. Reynolds, who acted both as manager of the mine, and as steward or agent to Mr. Bassett; that a transfer of mining property is effected, according to the custom in Cornwall, by an entry in the cost-book of the mine; that the 16 shares in question were so entered, but that a line was drawn through Mr. Bassett's name. The mine which had been previously worked at a loss, and suspended, was reopened, and for a year proved a losing concern. Mr. Bassett having, as shown by an entry in Mr. Reynolds's hand-writing, paid in July, 1842, 142l. 14s. as his share of the cost so incurred. Since that period, however, it had become more profitable, and the petition on which the present appeal was founded, claimed for the representative of Mr. Bassett, deceased, in 1843, the property of the share in question.

Mr. Bacon, on behalf of the appellant, contended, that there had been no complete transfer of the shares, resting his argument upon the following grounds: that the entry in the cost-book, which would have created such a transfer, was scored through; that Mr. Bassett was at the time when the transfer must have taken place in such embarrassed circumstances that he was quite unable on his own account to enter into a speculation of the kind; that an account rendered by Mr. Reynolds to Mr. Bassett, in December, 1842, and which must have embraced the period when the latter ought to have paid his share in the loss of the mine, amounting to 142l. 14s., bore no reference to that transaction; and that the entry in the merchant's ledger of that payment contained the name of Mr. Reynolds bracketed with that of Mr. Bassett. The learned counsel then proceeded to argue that, supposing the property in the shares in question did at the time indicated by the entry in the cost-book belonging to Mr. Bassett, there was good ground to believe that they had been retransferred to Mr. Reynolds. In proof of this position he relied upon the fact that Mr. Reynolds had paid the loss, with respect to those shares in working the mine until it had become profitable, out of his own pocket, and after Mr. Bassett's death; that the erasure in the entry, Mr. Bassett's embarrassments, and Mr. Reynolds's known probity of character, furnished sufficient grounds (though no positive proof existed) for referring the matter back for further inquiry to be made in such manner as the Court might think fit.—Mr. NICHOLSON having followed on the same side.

The LORD CHANCELLOR, without hearing counsel on the other side said, it was quite clear that the entry in the cost-book constituted a complete transfer; that under such circumstances the onus of proving any right which might direct the title so conferred rested on the appellant; that the Vice-Warden had that question raised before a jury, who were of opinion that no proof of any transfer existed; that he (the Lord Chancellor) concurred in the justice of that decision, and should, therefore, recommend his Royal Highness to affirm the judgment of the court below, with costs.

LORD LYNDHURST and Mr. P. LEIGH having concurred, his Royal Highness PRINCE ALBERT pronounced judgment accordingly, and the Court rose.

SHARE MORTGAGES—IMPORTANT QUESTION.
STANNARIES OF CORNWALL.

STYMONS v. DAVY.—This was a case in equity, heard before his Honour the Vice-Warden, on the 7th of May, and fully reported in the *Mining Journal* of the 22d. It involved a new and important point—whether a person holding a mine share in mortgage has the power to sell that share. His Honour took time to consider; but has hastened his decision, in order to avoid the inconvenience that might arise from the fluctuation of the cause of action—a mining share in Wheal Trelawney. In the judgment now sent down, his Honour first reviews the pleadings (no oral testimony having been adduced at the hearing); and then proceeds to state, that the first and main question of the case arose on the letter of the 8th February, 1845, which letter the defendant contended conferred on him a right to sell, without the aid of this, or any other court, "if at the expiration of six calendar months, the plaintiff's debt to him were not paid." His Honour was of opinion that this letter neither contained nor conferred any power of sale, or any immunity from the ordinary obligations of a mortgage. The object and effect of the letter, generally, was to narrow and derogate from the apparent right of the defendant, which arose from the absolute transfer, and not to confer any new rights on him as mortgagee. It was the part of the mortgage to confer such rights; and it could hardly be supposed that a consent on the part of the mortgagee to negative so notorious, and so favoured a right in himself as that of redemption, was intended to be contained, or could be found in words used by the mortgagee only, in a mere writing, without legal form, and without certainty, and from which (supposing implication in such a subject were allowed) no implication could safely be raised. The exercise of all such rights of ownership under the transfer as may belong to the transferee might exist not only in the receipt of dividends, and in auditing and allowance of mining costs, but in throwing up the share, if the prospects of the adventure, and the conduct and condition of the mortgage should justify the mortgagee in taking that course. A right of ownership in a mortgage was not simply a right of ownership, as in an unconditional purchaser. In a court of equity, a mortgagee had no such rights conferred merely by the mortgage conveyance. The phrase, therefore, seemed to give no powers to the mortgagee, but to restrain him at law, not merely in equity, from doing anything legal or equitable against the mortgagee's interest, till six months should have passed. If so, then the effect of the phrase was to make the mortgagee's interest absolute at law, when those six months were passed; whereas the parties come within the cognizance of equity, which rather forbids than allows a mortgagee to avail himself fully of his legal title, without its previously obtained consent. But assuming that, from the nature of this transferred interest—a mining share—a decree of foreclosure was not necessary; it did not follow that defendant could alienate that interest, without previous notice given to the plaintiff. And it appeared to his Honour, that the defendant had alienated this mining share without notice; for he confessed the want of notice, when he admitted that he told plaintiff, in February, 1845, that "he thought the plaintiff would be well pleased that he had sold the share." And, had he not confessed the want of notice, he must have proved notice affirmatively. The defendant was bound, as between himself and plaintiff, to exercise his rights in a prudent and business-like manner (per *V. C. Knight Bruce*, 2 Collyer, 465). He might have acted (as he thought) for the best, when he sold the share for 185l.; but he could hardly be said to have acted in a business-like manner, or prudently to have exercised his rights, when he, without notice to plaintiff, deprived him of his right. The defendant did not deny his obligation to account with the plaintiff; but he denied that the account should be taken on any price beyond what he had received from the sale of the share. The first and main question, which involved in it the right to sell the share, was, therefore, converted into a second question—what was to be taken as the value of the share? If the defendant had a right to sell, its value would be, of course, that which he received for it. But as his Honour could perceive no power of sale, nor any right in defendant to sell without notice, if he had the power, it might be that the sum received was not to be taken as the value which might have been received. Had defendant possessed another share in Wheal Trelawney, the Court might have been justified in considering such share as that which did belong to plaintiff, and in ordering its transfer to him after an account before the registrar. But it was admitted, and must be assumed from the pleadings, that the defendant had no other share in Wheal Trelawney. The Court could not order defendant to purchase a share (for a mining share was not like stock) and transfer it to plaintiff; as the defendant might, from inability to find a share on sale, involuntarily and unavoidably disobey the order. The suit, therefore, was one for an account simply; but to avoid inconvenience that might result from the fluctuating nature of the cause of suit, his Honour felt himself justified in adopting the suit, and in giving an opinion on the time at which the value of the share should be taken. And he apprehended that the value of the share must be taken to be the price at the time when plaintiff was ready and offered to do and receive what was just as between him and defendant; for, had defendant then done what, on his part, was just, and had paid the plaintiff the then value of the share, or allowed that value in account, neither party could then, nor after (whatever might have been the fluctuations in value), have justly complained. His Honour concluded, by decreeing that "the defendant must, therefore, account before the registrar with the plaintiff, and the value of the share in such account must be its full value in February, 1846. If that value be highest on the 3d February, 1846, that will be the value; for then, in my opinion, there is evidence that plaintiff was willing to account, though on the 18th day of the same month, he more formally expressed himself as being willing to account."

Cwm Avon Works.—TESTIMONIAL OF RESPECT.—Several clerks and agents met at the house of Mr. James Cross, Cwm Avon, on the 13th May, to present Mr. J. Hore, formerly of Truro and Redruth, who had been 12 years a cashier in the Cwm Avon Works, with a silver tea-pot, of the value of 20l., as a small token of respect and esteem. It was presented by Mr. Hopkin, and Mr. S. Banford, and bears the following inscription:—"Presented by the clerks and agents of Cwm Avon Works, to Mr. John Hore, late cashier, as a small tribute of sincere esteem and regard."

REPEAL OF THE COPPER ORE DUTIES.

We noticed in the *Mining Journal* of the 15th May a letter to the Earl of Clarendon, as President of the Board of Trade, on the subject of the copper ore duties, by Sir CHARLES LEMON, Bart., and endeavored to show the fallacy of its arguments, and the incorrect nature of the assertions introduced. We are happy to observe, that the committee appointed for the purpose of urging on the Government the necessity of their repeal, have at length published a reply, in which the whole fabric of the *saule* of protection is more completely demolished, and the policy of carrying out free trade principles to the utmost clearly established. We now proceed to lengthened extracts, without comment, leaving the unanswerable arguments used to carry conviction to the minds of our readers.

"It is, in fact, a matter of satisfaction to observe, that Sir C. Lemon does not rest his defence of the copper ore duties on any ground of principle, nor does he even assert that their continuance is necessary for the protection of British mines; on the contrary, he says, in page 24 of his letter, 'I do not conceal my impression that the heavy duties which cling to the duty are somewhat exaggerated'; and in another place, after stating that he conceives that their repeal would have a tendency to aggravate any ill fortune which might befall the working miner, in his present depressed position (a state of depression, we may remark, certainly not greater than that under which the working classes of most other parts of the kingdom labour at this period of scarcity), he adds, 'I do not say that the repeal of the duty on copper ore will necessarily produce this effect.' If, therefore, it is his letter to your lordship, to show that the imposition of the duty in 1842, this announces that his sympathies are wholly for the mining population who form so large and influential a portion of his constituency, whether the repeal of the duties would have an injurious effect upon their interests, we submit that there is the less reason for refusing a concession, which we maintain is essential for the preservation of so important a trade."

"All that Sir C. Lemon's statement amounts to is, that the advocates for the repeal of the duties have exaggerated the extent of the evil which has arisen from their operation, and that, in his opinion, they ought to be removed and a case of greater injury has been made out. He appears to think it exceedingly unreasonable that we should complain until we have quite lost the trade, and other countries have possessed themselves of it; then, he thinks, we might have some grounds for asking Government to remove the restrictions, in order that we might attempt to regain it. If the trade had gone from us to the extent required to convince Sir C. Lemon that it is in danger, we should not attempt to waste the time of your lordship and of the Government, and permit us to add, our own regret, by vain clamours after that which would be irretrievable. Trade is not easily driven from its accustomed and well-worn channels into a new direction, and the difficulties of the change in its course have been overcome, and a new set of interests have been created, and made dependent upon it, in the new lands through which it has been made to flow, all past experience shows, that to force it back again into its original channel is an impracticable task. No stronger illustration of this truth need be adduced than the working of the lead ore duties, as shown in page 22 of the parliamentary return. There is abundant evidence, in the documents which Sir C. Lemon has made the subject of his letter to your lordship, to show that since the imposition of the duty in 1842, this trade has begun to take a direction in which it was previously unknown, and that a sufficient portion of it has already been diverted to afford the strongest grounds for believing that if the moving cause is continued much longer in operation, the only trace of it which will be left to us will be the vacancy which its absence will occasion."

"We have stated that Sir C. Lemon does not advance any grounds for the maintenance of the duties as essential for the protection of any British interests; except, indeed, we regard in this light his allusion to it as a desirable addition to the revenue, which, however, we look merely as an invocation for aid to the Chancellor of the Exchequer, who in a time of less pressing emergency would, we are sure, be quite beyond the reach of so paltry a consideration as that of a steadily decreasing revenue, now amounting to 50,000l. a year only, obtained by the sacrifice of important trading and manufacturing interests; whilst indirectly, by discouraging the export of our manufactures, and diminishing the employment of our people, a great and permanent loss of revenue will undoubtedly be occasioned. Neither does the attempt to dispute the injurious effect which the duties have upon the interests of the British miner, and it is unnecessary, therefore, to enlarge here upon a branch of the subject, with the bearings of which your lordship and the Government are already fully acquainted."

"We proceed, therefore, to apply ourselves to the objections raised by Sir C. Lemon to the various grounds on which our claim for the repeal of the duties is founded, which he has compiled in the shape of 'pleas' from the documents published by the order of the Court."

"And, in the first place, we must remark that these pleas, as drawn up by Sir Charles Lemon, state the case of the advocates of the repeal of the duties in some points incorrectly, in others unfairly, and as a whole incompletely."

"We will not follow Sir C. Lemon's example, by imputing to him an intention willfully to misrepresent the case which he assumes to refute, although we have a right to complain that the mode in which he has stated these 'pleas,' gives to them the appearance of having been extracted verbatim from the documents in question, which, in fact, is far from being the case. In some cases, from misconception, and in others from being deprived of their context, are made to convey a different meaning from that intended, and altogether express incompletely the views of the petitioners. It is difficult, however, to acquit him of an intention to misrepresent Messrs. Gemmell and Co., in the use which he has made of an extract from their letter to J. MacGregor, Esq., Secretary of the Board of Trade, of the 6th October, 1843, by quoting only a small portion of a sentence, omitting the context, and thereby giving to their words a meaning precisely the opposite of that which they intended to convey. The following is the complete extract from Messrs. Gemmell's letter, marking by italics the portion which Sir C. Lemon has thought fit to omit:—

"From the above remarks, it would appear that the IMMEDIATE effects of the change have been exactly those contemplated by her Majesty's Government—viz., that it has, to a moderate extent, increased the trade of the British shipowners, while it has added largely to the profits of the British copper mine-owners, and been a source of some revenue to the British Treasury; but the ULTIMATE effects upon the most distant view, as far as it will, almost certainly, deprive us of the whole of our trade in smelting foreign ores, transferring that trade to Chili, or to our manufacturing rivals in the United States, France, or Belgium, and in so far as it is almost equally certain to throw out of employment two-thirds of the vessels now engaged in the carrying of ores, and in so far as it cannot fail deeply to aggravate the feeling of hostility to Great Britain produced among foreigners by former restrictive measures of our Government, while it can neither permanently benefit our miners, nor long continue to be a source of revenue to our national treasury. 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IMPROVED LIFTING JACKS.

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GALLOWAYS AND CO.

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MANCHESTER.*The attention of parties who employ
Lifting Jacks,is respectfully requested to the super-
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hitherto in use.

IMPROVED RATCHET JACK.

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HALEY'S PATENT LIFTING JACK.

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Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

Society.	Address.	Day.	Hour.
Atlantic	14, Grafton-street	Saturday	8 P.M.
Western Scientific Institute	Leicester-square	Monday	8 P.M.
Entomological	17, Old Broad-street	Monday	8 P.M.
Pathological	21, Regent-st., Waterloo-pl.	Monday	8 P.M.
Medical and Chirurgical	53, Berners-street	Tuesday	8 P.M.
Civil Engineers	25, Great George-street	Tuesday	8 P.M.
Zoological	11, Hanover-square	Tuesday	8 P.M.
Synodical	1, Mortimer-st., Cavendish-sq.	Tuesday	7 P.M.
Society of Arts	Adelphi	Wednesday	8 P.M.
Geological	Somerset-house	Wednesday	8 P.M.
Pharmaceutical	17, Bloomsbury-square	Wednesday	9 P.M.
Ethnological	37, Great Russell-street	Wednesday	8 P.M.
Literary Fund	73, Great Russell-street	Wednesday	8 P.M.
Royal	Somerset-house	Thursday	4 P.M.
Antiquaries	Somerset-house	Thursday	8 P.M.
Royal Society of Literature	4, St. Martin's-place	Thursday	8 P.M.
Medico-Botanical	32, Saville-street	Thursday	8 P.M.
Astronomical	Somerset-house	Friday	3 P.M.
Philosophical	End. Lib., 12, St. James's-sq.	Friday	7 P.M.
Royal Botanic	Inner Circle, Regent's-park	Saturday	3 P.M.

INSTITUTION OF CIVIL ENGINEERS.

PRESIDENT'S CONVERSATIONS.

Sir John Rennie (president of the Institution) gave his first conversation this season, on Saturday evening, which was both numerous and brilliantly attended by the members of the Institution and by visitors, who appeared to be alike delighted with the intellectual treat provided for them in the extensive collection of works of science and art, arranged in the most judicious manner, and with the host's generous hospitality, as displayed in the refreshment room.

It would be impossible to enumerate all the objects of interest in the works of art or models of machinery exhibited: we must, therefore, restrict our notice to some of the most prominent.

Count D'Ossay contributed some spirited statues and busts of the Emperor of Russia, Daniel O'Connell, the Duke of Wellington, &c., which were deservedly much admired. Paintings and sketches by Oliver, Buss, Scanlan, Digby, Wyatt, and Ward; enamel paintings by Bone; chalk drawings, from Mr. Fuller; and some beautiful sketches, from Messrs. Ackerman's collection, were profusely scattered through the rooms. Taylor, Williams, and Jordan, had some excellent specimens of machine carvings; and Mr. Rogers some delicate examples of hand carving.

A curious specimen of laminated granite, from Dartmoor, contributed by Mr. Freeman, appeared to excite much interest among the geologists.

The collection of models was more extensive than we ever remember to have seen it, and as the whole of the ground-floor was devoted to their reception, there was ample space for displaying them to advantage.

A series of models from the Admiralty exhibited the construction of a 60-gun ship at various epochs, from the highly decorated, but clumsy, vessel of 1637, to the simple, but elegant and effective, *Vernon* of 1840. Other models illustrated the most approved forms of bows, sterns, and midship section; and the general lines of the vessels composing the experimental squadron were contrasted by a series of uniform models. The wave principle was illustrated by models from Mr. Scott Russell and Dr. Philby; and the progress of the steam navy was exemplified by beautiful models of vessels and engines, constructed by Messrs. Rennie, Maudslay, and others. The screw propellers by G. Rennie, Woodcroft, and Maudslay, excited much attention. Models of Brunel's block machinery, and Hurwood's patent scuttle, were appropriately mingled with this part of the collection.

All the various systems of electrical telegraphs were represented, and were at work in the apartments.—Bain's electric clock—North and Gamble's simplified single-wire telegraph—the Electric Telegraph Company's "cable" system, as used at the Admiralty—Brett and Little's apparatus, and Brett's telegraph, in which, by depressing a series of keys, corresponding letters are brought into contact with a continuous strip of paper, and the communication is printed at any number of miles distant.

Mr. Cowper contributed a series of models of the old French and other telegraphs, in order to form a contrast with the present instantaneous and certain methods of communication. There was a series of models of bridges of all kinds, amongst which we remarked one of corrugated cast-iron, erected by Mr. B. on the Farnbridge Railway.

The model of the iron tubular bridge, by Mr. H. Stephenson, at Conway, beautifully shown, on various scales, by Salter's elegant card-board models.

A cast-iron girder bridge, by Mr. Borthwick, of the same construction as that over the Dee, at Chester, and which is now exciting such painful interest.

The drops for loading coal vessels at the Butte Dock, Cardiff, by Mr. Highton, excited much attention, and appeared to be an ingenious modification of the system used in the north, well adapted to the purposes of the South Wales railways and shipping ports.

Stephenson's long boiler locomotive, Bessemer's steel, and the simple and elegant portable Stevens' efficient railway signals, and Clarke and Varley's new atmospheric railway tube, formed an interesting series of railway models.

Cochrane's machine for sawing out carved timbers of all forms, without waste, was worked, and was universally admired. It was stated that these efficient machines were now being introduced into the royal dockyards.

Little's very ingenious new printing machine, by which the number of sheets now dispatched, great as the quantity seems, can be doubled, was also at work, and excited much attention.

We must reserve until the next meeting the notice of the other models, which were so numerous and well chosen. That it is impossible to do justice to them all.

Among the guests we noticed almost everybody of eminence in science and art, and a number of the aristocracy, who, from their Parliamentary duties, have their attention now directed to scientific matters. The president received his guests with that distinguished urbanity which is characteristic of him; and his obliging and hospitable attention to his friends, in which he was ably seconded by Mr. Manby, the secretary, was beyond all praise.

JUNE 1.—Sir J. RENNIE (President) in the chair.

The paper read was "An Account of the Iron barque *Josephine*, of Liverpool," by Capt. Masters, who commanded her in the voyages she has made. The subject of iron vessels is one of great importance, and the use of that material in naval architecture has been steadily progressing since it was introduced for sea-going vessels by Mr. Manby, in the steamer named after him, in 1831, and which was the only vessel that ever conveyed a cargo direct between London and Paris, without transshipment. Sanguine hopes had been entertained of introducing iron for vessels of war; but it appears from the partial accounts that have been made public of the results of the experiments at Woolwich and elsewhere, that the effects of cannon-shot upon iron vessels are more destructive than upon timber.

The paper read was a plain and somewhat dry specification of the construction of the vessel, which, with, however, when printed in *extenso* in the minutes of proceedings, be extremely useful. The main dimensions of the barque *Josephine* are—Length, over all, 99 ft. 3 in.; extreme breadth, 24 ft. 6 in.; depth of hold, 9 ft. 9 in.; register tonnage, 166 tons; by old measurement, 221 tons. She was of a peculiar build, differing from almost any other merchant ship, being intended for service in the Mexican trade, and calculated to cross the bar of Tampico, and other impediments. She was entirely of iron, even to the bulwarks; and as she lay low in the water, drawing 9 ft. aft, and 8 ft. 6 in. forward, her ports were hung on hinges forward, so that they should act as valves, and throw the water to escape from the deck, and yet shut of themselves when she heeled over on her side. Her general rate of sailing was from 11 to 13 knots per hour; she was very buoyant and very dry, rising well to the sea. There was great capacity for stowing the cargo, owing to the absence of large projecting timbers. She was somewhat damp forward and aft, but was very dry in the main hold. There was not found to be any difference in the health of the crew from that of wooden vessels; she was a little cooler than other ships, owing to her being so deep in the water, and the timber material did not retain the heat like wood.

The *Josephine* was, however, paid with various compositions as experiments. That which succeeded best was a barrel of varnish, 21 cwts. of best tallow, 40 lbs. black lead, 7 lbs. brimstone, and 70 lbs. arsenic. This being applied hot, the iron having been previously warmed and paid with boiled linseed oil, appeared to have prevented rustiness, as after her voyages there was little weed or grass, and scarcely any barnacles; but very slight oxidation took place, and that only where the composition had been rubbed off. They were as much annoyed by rats as in a timber ship, nor could they be destroyed by any of the means adopted. The principal feature of the paper was that which treated of the local attraction of the compass, which can scarcely be in an abridged form. It appeared that as long as the ship was on an even keel, and perfectly upright, the compass acted correctly, but in proportion to the listing over so was the derangement of the magnet, the local attraction being changed by the side frames and deck-beams falling into new positions. This caused great variation in the ship's course, and it led to a conjecture whether this may not have been the cause of the loss of the *Great Britain*, as if her compasses were acted upon as she was, so that they should act as valves, and throw the water to escape from the deck, and yet shut of themselves when she heeled over on her side.

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Law Intelligence.

THE COST-BOOK SYSTEM—SOUTH WHEAL FRANCIS.
Duchy of Cornwall Court.

His Royal Highness Prince Albert, in virtue of his office of Warden of the Duchy of Cornwall, held a Court on Saturday, in the council chamber of the Privy Council Office. Besides His Royal Highness, the Court consisted of the Lord Chancellor, Lord Lyndhurst, and Mr. Pemberton Leigh. The case under consideration was that of *REYNOLDS v. BASSETT*.—Mr. Bacon (with whom was Mr. Nicholson) appeared for the appellants; and Bethell (with whom were Mr. Follett and Mr. Montague Smith) for the defendant. This was an appeal from the decision of the Vice-Warden in the Stannaries Court, on the petition of Elizabeth May Bassett, the representative of J. Bassett, claiming the property of 16 shares in South Wheal Francis Mine, in the Duchy of Cornwall. From the statements of counsel, it appeared that the property in question belonged originally to Mr. Wm. Reynolds, who acted both as manager of the mine, and as steward or agent to Mr. Bassett; that a transfer of mining property is effected, according to the custom in Cornwall, by an entry in the cost-book of the mine; that the 16 shares in question were so entered, but that a line was drawn through Mr. Bassett's name. The mine which had been previously worked at a loss, and suspended, was reopened, and for a year proved a losing concern, Mr. Bassett having, as shown by an entry in Mr. Reynolds's hand-writing, paid in July, 1842, 142l. 14s., as his share of the cost so incurred. Since that period, however, it had become more profitable, and the petition on which the present appeal was founded, claimed for the representative of Mr. Bassett, deceased, in 1843, the property of the share in question.

Mr. BACON, on behalf of the appellant, contended, that there had been no complete transfer of the shares, resting his argument upon the following grounds: that the entry in the cost-book, which would have created such a transfer, was scored through; that Mr. Bassett was at the time when the transfer must have taken place in such embarrassed circumstances that he was quite unable on his own account to enter into a speculation of the kind; that an account rendered by Mr. Reynolds to Mr. Bassett, in December, 1842, and which must have embraced the period when the latter ought to have paid his share in the loss of the mine, amounting to 142l. 14s., bore no reference to that transaction; and that the entry in the merchant's ledger of that payment contained the name of Mr. Reynolds bracketed with that of Mr. Bassett. The learned counsel then proceeded to argue that, supposing the property in the shares in question did at the time indicated by the entry in the cost-book belong to Mr. Bassett, there was good ground to believe that they had been retransferred to Mr. Reynolds. In proof of this position he relied upon the fact that Mr. Reynolds had paid the loss, with respect to those shares in working the mine until it had become profitable, out of his own pocket, and after Mr. Bassett's death; that the erasure in the entry, Mr. Bassett's embarrassments, and Mr. Reynolds's known probity of character, furnished sufficient grounds (though no positive proof existed) for referring the matter back for further inquiry to be made in such manner as the Court might think fit.—Mr. NICHOLSON having followed on the same side.

The LORD CHANCELLOR, without hearing counsel on the other side said, it was quite clear that the entry in the cost-book constituted a complete transfer; that under such circumstances the onus of proving any right which might divest the title so conferred rested on the appellants; that the Vice-Warden had that question raised before a jury, who were of opinion that no proof of any transfer existed; that he (the Lord Chancellor) concurred in the justice of that decision, and should, therefore, recommend his Royal Highness to affirm the judgment of the court below, with costs.

Lord LYNDHURST and Mr. P. LEIGH having concurred, his Royal Highness PRINCE ALBERT pronounced judgment accordingly, and the Court rose.

SHARE MORTGAGES—IMPORTANT QUESTION.

STANNARIES OF CORNWALL.

SYMONS v. DAVY.—This was a case in equity, heard before his Honour the Vice-Warden, on the 7th of May, and fully reported in the *Mining Journal* of the 22d. It involved a new and important point—whether a person holding a mine share in mortgage has the power to sell that share. His Honour took time to consider; but has hastened his decision, in order to avoid the inconvenience that might arise from the fluctuation of the cause of action—a mining share in Wheal Trelawney. In the judgment now sent down, his Honour first reviews the pleadings (no oral testimony having been adduced at the hearing); and then proceeds to state, that the first and main question of the case arose on the letter of the 8th February, 1845, which letter the defendant contended conferred on him a right to sell, without the aid of this, or any other court, "if at the expiration of six calendar months, the plaintiff's debt to him were not paid." His Honour was of opinion that this letter neither contained nor conferred any power of sale, or any immunity from the ordinary obligations of a mortgage. The object and effect of the letter, generally, was to narrow and derogate from the apparent right of the defendant, which arose from the absolute transfer, and not to confer any new rights on him as mortgagee. It was the part of the mortgagee to confer such rights; and it could hardly be supposed that a consent on the part of the mortgagee to negative so notorious, and so favoured a right in himself as that of redemption, was intended to be contained, or could be found in words used by the mortgagee only, in a mere writing, without legal form, and without certainty, and from which (supposing implication in such a subject were allowed) no implication could safely be raised. The exercise of all such rights of ownership under the transfer as may belong to the transferee might exist not only in the receipt of dividends, and in auditing and allowance of mining costs, but in throwing up the share, if the prospects of the adventure, and the conduct and condition of the mortgagee should justify the mortgagee in taking that course. A right of ownership in a mortgagee was not simply a right of ownership, as in an unconditional purchaser. In a court of equity, a mortgagee had no such rights conferred merely by the mortgage conveyance. The phrase, therefore, seemed to give no powers to the mortgagee, but to restrain him at law, not merely in equity, from doing any thing legal or equitable against the mortgagee's interest, till six months should have passed. If so, then the effect of the phrase was to make the mortgagee's interest absolute at law, when those six months were passed; whereupon the parties come within the cognizance of equity, which rather forbids than allows a mortgagee to avail himself fully of his legal title, without its previously obtained consent. But assuming that, from the nature of this transferred interest—a mining share—a decree of foreclosure was not necessary; it did not follow that defendant could alienate that interest, without previous notice given to the plaintiff. And it appeared to his Honour, that the defendant had alienated this mining share without notice; for he confessed the want of notice, when he admitted that he told plaintiff, in February, 1846, that "he thought the plaintiff would be well pleased that he had sold the share." And, had he not confessed the want of notice, he must have proved notice affirmatively. The defendant was bound, as between himself and plaintiff, to exercise his rights in a prudent and business-like manner (per V. C. Knight Bruce, 2 Collyer, 465). He might have acted (as he thought) for the best, when he sold the share for 185l.; but he could hardly be said to have acted in a business-like manner, or prudently to have exercised his rights, when he, without notice to plaintiff, deprived him of his right. The defendant did not deny his obligation to account with the plaintiff; but he denied that the account should be taken on any price beyond what he had received from the sale of the share. The first and main question, which involved in it the right to sell the share, was, therefore, converted into a second question—what was to be taken as the value of the share? If the defendant had a right to sell, its value would be, of course, that which he received for it. But as his Honour could perceive no power of sale, nor any right in defendant to sell without notice, if he had the power, it might be that the sum received was not to be taken as the value which might have been received. Had defendant possessed another share in Wheal Trelawney, the Court might have been justified in considering such share as that which did belong to plaintiff, and in ordering its transfer to him after an account before the registrar. But it was admitted, and must be assumed from the pleadings, that the defendant had no other share in Wheal Trelawney. The Court could not order defendant to purchase a share (for a mining share was not like stock) and transfer it to plaintiff; as the defendant might, from inability to find a share on sale, involuntarily and unavoidably disobey the order. The suit, therefore, was one for an account simply; but to avoid inconvenience that might result from the fluctuating nature of the cause of suit, his Honour felt himself justified in adopting the suit, and in giving an opinion on the time at which the value of the share should be taken. And he apprehended that the value of the share must be taken to be the price at the time when plaintiff was ready and offered to do and receive what was just as between him and defendant; for, had defendant then done what, on his part, was just, and had paid the plaintiff the then value of the share, or allowed that value in account, neither party could then, nor after (whatever might have been the fluctuations in value), have justly complained. His Honour concluded, by decreeing that "the defendant must, therefore, account before the registrar with the plaintiff, and the value of the share in such account must be its full value in February, 1846. If that value be highest on the 3d February, 1846, that will be the value; for then, in my opinion, there is evidence that plaintiff was willing to account, though on the 18th day of the same month, he more formally expressed himself as being willing to account."

CWM AVON WORKS—TESTIMONIAL OF RESPECT.—Several clerks and agents met at the house of Mr. James Cross, Cwm Avon, on the 13th May, to present Mr. J. Hore, formerly of Truro and Redruth, who had been 12 years a cashier in the Cwm Avon Works, with a silver tea-pot, of the value of 20l., as a small token of respect and esteem. It was presented by Mr. Hopkin, and Mr. S. Banford, and bears the following inscription:—"Presented by the clerks and agents of Cwm Avon Works, to Mr. John Hore, late cashier, as a small tribute of sincere esteem and regard."

REPEAL OF THE COPPER ORE DUTIES.

We noticed in the *Mining Journal* of the 15th May a letter to the Earl of Clarendon, as President of the Board of Trade, on the subject of the copper ore duties, by Sir CHARLES LEMON, Bart., and endeavoured to show the fallacy of its arguments, and the incorrect nature of the assertions introduced. We are happy to observe, that the committee appointed for the purpose of urging on the Government the necessity of their repeal, have at length published a reply, in which the whole fabric of the *sales of protection* is most completely demolished, and the policy of carrying out free trade principles to the utmost clearly established. We now proceed to lengthened extracts, without comment, leaving the unanswerable arguments used to carry conviction to the minds of our readers.

"It is, in fact, a matter of satisfaction to observe, that Sir C. Lemon does not rest his defence of the copper ore duties on any ground of principle, nor does he even assert that their continuance is necessary for the protection of British mines; on the contrary, he says, in page 34 of his letter, 'I do not conceal my impression that the fears of those who cling to the duty are somewhat exaggerated'; and in another place, after stating that he conceives that their repeal would have a tendency to aggravate any ill fortune which might befall the working miner, in his present depressed position (a state of depression, we may remark, certainly not greater than that under which the working classes of most other parts of the kingdom labour at this period), he says, 'I do not say that the repeal of the duty on copper ore will necessarily produce this effect.' If, therefore, it is a matter of so much doubt, even in the mind of the Member for West Cornwall, who announces that his sympathies are wholly for the mining population who form so large and influential a portion of his constituency, whether the repeal of the duties would have an injurious effect upon their interests, we submit that there is the less reason for refusing a concession, which we maintain is essential for the preservation of so important a trade."

"All that Sir C. Lemon's statement amounts to is, that the advocates for the repeal of the duties have exaggerated the extent of the evil which has arisen from their operation, and that, in his opinion, they ought to be removed until a case of greater injury has been made out. He appears to think it exceedingly unreasonable that we should complain until we have quite lost the trade, and other countries have possessed themselves of it; then, he thinks, we might have some grounds for asking Government to remove the restrictions, in order that we might attempt to regain it. If the trade had gone from us to the extent required to convince Sir C. Lemon that it is in danger, we should not attempt to waste the time of your lordship and of the Government, and permit us to add, our own also, by vain clamours after that which would be irrecoverable. Trade is not easily diverted from an accustomed and well-worn channel into a new direction; but when the difficulties of the change in its course have been overcome, and a new set of interests have been created, and made dependant upon it, in the new lands through which it has been made to flow, all past experience shows, that to force it back again into its original channel is an impossible task. No stronger illustration of this truth need be adduced than the working of the lead ore duties, as shown in the parliamentary return."

There is abundant evidence, in the documents which Sir C. Lemon has made the subject of his letter to your lordship, to show that since the imposition of the duty in 1842, this trade has begun to take a direction in which it was previously unknown, and that a sufficient portion of it has already been diverted to afford the strongest grounds for believing that if the moving cause is continued much longer in operation, the only trace of it which will be left to us will be the vacancy which its absence will occasion."

"We have stated that Sir C. Lemon does not advance any grounds for the maintenance of the duties as essential for the protection of any British interests; except, indeed, we regard in this light his allusion to it as a desirable addition to the revenues, which, however, we look upon merely as an invocation for aid to the Chancellor of the Exchequer, who in a time of less pressing emergency would, we are sure, be quite beyond the reach of so paltry a consideration as that of a steadily decreasing revenue, now amounting to 50,000l. a year only, obtained by the sacrifice of important trading and manufacturing interests."

"We proceed, therefore, to apply ourselves to the objections raised by Sir C. Lemon to the repeal of the duties, and for the repeal of the duties in the order of the House of Commons. "And, in the first place, we must remark that these pleas, as drawn up by Sir Charles Lemon, state the case of the advocates of the repeal of the duties in some points incorrectly, in others unfairly, and as a whole incompletely. "We will not follow Sir C. Lemon's example, by imputing to him an intention willfully to misrepresent to the case which he has to argue, although we have a right to complain that the mode in which he has stated these 'pleas,' gives to them the appearance of having been extracted verbatim from the documents in question, when, in fact, they are his own compilation, and in some cases from misconception, and in others from being deprived of their context, are made to convey a different meaning from that intended, and altogether express incompletely the views of the petitioners. It is difficult, however, to acquit him of an intention to misrepresent Messrs. Gemmell and Co., in the use which he has made of an extract from their letter to J. Macgregor, Esq., Secretary of the Board of Trade, of the 18th of February, 1845, by quoting only a small portion of the contents, omitting the context, and thereby giving to their words a meaning precisely the opposite of that which they were intended to convey. The following is the complete extract from Messrs. Gemmell's letter, marking by italics the portion which Sir C. Lemon has thought fit to omit:—

"From the above remarks, it would appear that the IMMEDIATE effects of the change have been exactly those contemplated by Her Majesty's Government—viz., that it has, to a large extent, while the duties on the British shipwrecked trade, and the duties on the profits of the British copper mine-owners, and been a source of some revenue to the British Government; but its ULTIMATE effects promise to be most disastrous, in so far as it will, almost certainly, deprive us of the whole of our trade in smelting foreign ores, transferring that trade to Chili, or to our manufacturing rivals in the United States, France, or Belgium;—and in so far as it is almost equally certain to throw out of employment two-thirds of the vessels now engaged in the carrying of ores,—and in so far as it cannot fail to deprive the carrying trade of the United Kingdom of a large portion of its business, and thereby to deprive our Government of a large portion of its revenue. It appears to us, that the most proper course for the adoption of Her Majesty's Government, will be to admit copper ore FREE OF DUTY, or at a duty merely nominal."

"When it is remembered that Messrs. Gemmell's letter was written some time before the injurious operation of the duties was actually experienced in the shape of diminished imports, it is remarkable how correctly the predictions which they expressed have been verified."

"Sir C. Lemon has also altogether omitted to notice some of the most material grounds upon which the petitioners rested their case; but it will be sufficient that we confine ourselves for the present to the points which he has raised. "The first 'plea' which he sets up for demolition is, 'that copper ore is now the only raw material of manufacture subject to duty.' This wording does not correctly convey the statement actually made, which was, 'that copper ore is the only raw material imported for manufacture, which is subject to duty'; a statement which is well known by the department officials, which your lordship provides to be substantially correct. Nevertheless, Sir C. Lemon imputes to it as an intentional misstatement to the petitioners, 'who,' he says, 'have preferred to shut their eyes, lest they should see timber and tallow staring them in the face.' Timber and tallow!—what parallel is there between these articles and copper ore? In what sense are they raw materials imported for manufacture, we would ask Sir C. Lemon? They are imported for consumption, and not for manufacture, and we cannot conceive how so obvious a distinction could escape his notice, especially as in the next sentence he states that 'they are extensively consumed in the Cornish mines'; after this we are not surprised that he never could understand why sugar was not a raw material. It is certainly quite as much in point as 'timber and tallow.' The unfairness which induces him to charge, upon such a foundation, a misstatement on the petitioners, is well followed up in the next sentence, in which he calls on them to 'give back to the miner the relief from the duties on timber which he then (previous to the tariff of 1842) enjoyed'; as if the petitioners had either been the means of depriving the miner of the drawback formerly allowed on timber consumed for mining purposes, or had it in their power to restrict its use."

"The second 'plea' is, that 'in consequence of duties first imposed by the tariff of 1842, the trade in foreign copper ores to this country has been, and is likely further to be, materially diminished.' Sir C. Lemon remarks thereupon, that 'this statement represents a growing case of diminution, arising from a cause which commenced in 1842.' And he gives a statement of the imports of metallic copper in ores, from 1838 to 1846, inclusive, from which he arrives at the extraordinary conclusion, that instead of a growing diminution, there has been a 'vast increase,' notwithstanding his figures show that the import had diminished from 18,244 tons of copper in 1844 when it reached its 'summit level,' to 11,172 tons in 1845, and 10,879 tons in 1846."

"With respect to the diminution of import in consequence of the duties of 1842, until the season of 1827, when the law permitting the smelting of foreign copper ores in bond was passed, and for several years subsequently, no copper ores were imported into this country. The import of copper ores from Chili, in fact, may be said to have commenced with the year 1834, in which the import was 1671 tons of ore. There existed, however, from a remote period, a very considerable production of copper in Chili and Peru—in pure quality, and requiring a subsequent refining process to be made available for manufacturing purposes. The results of the first shipments of copper ores to England was such as to encourage larger consignments: the import increased from 250 tons of ore in 1832, to 20,500 tons in 1843, in which year it reached its highest point."

"The change in the law in 1842 was understood by all parties at the time to be, as stated by Mr. Gladstone, in the House of Commons, on the 11th of July of that year, 'an experiment'; the results of which could not be foreseen; considerable disadvantages had been attendant upon the system of smelting in bond, and until the results of the shipments of ore made under the new system were experienced, there were no grounds for altering the course of the trade."

"Moreover, the intelligence of the change in the law did not reach Valparaiso before quite the close of 1842, and could not be generally known in the mining districts of Chili and Peru until some time in 1843. The South American miners had, therefore, no inducement to make any strong effort to change the current of their trade until the results of the shipments in 1843 were known, which they could not have been until 1844, and until that year the imports continued to increase. In 1844 the unfavourable results of the shipments under the duty became known; but, from the nature of the trade, no immediate change of moment could be made. In the first place, nearly all the Chilean miners were largely indebted to the British merchants, who had advanced them capital to work their mines, for which there were no means of payment but by deliveries of ore for shipment to England; and, even had not this inducement existed, they had not the means of giving up the business of new direction to the trade. They Chili and Peru—in pure quality, and requiring a subsequent refining process to be made available for manufacturing purposes. The results of the first shipments of copper ores to England was such as to encourage larger consignments: the import increased from 250 tons of ore in 1832, to 20,500 tons in 1843, in which year it reached its highest point."

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duce is naturally sent to England, in return for the money advanced. It would only be under circumstances of the most extreme pressure that the current of this trade could be diverted from England. But what does Sir C. Lemon himself show? Why, that these Cuba mines, from having been prosperous and paying concerns, yearly increasing in their production, had arrived at such a state of depression, that the Cuba Mines alone had fallen off in production in 1846, as compared with the previous year, 7996 tons of ore, and 93,014l. in the value of its produce; whilst at their last meeting, 'the directors apologised for making no dividend, on the ground that the duty ran away with all their profits, to the amount of 13 or 15,000l.' The Santiago Mine, the next in magnitude in the island, had fallen off in a still greater proportion, the decrease having been 3123 tons of ore, and 46,186l. in money. Sir C. Lemon says, that this depression is to be attributed to 'the chances of mining,' as if these chances were not affected by the payment of the duty, which in the year 1846 amounted to from 12 to 15,000l. on the diminished production of one mine. And we beg to remind your lordship, that the parties chiefly interested in these mines are British subjects—that they largely employ British manufacturers, and British labour—and that they are, therefore, fairly entitled to the consideration of the British Government."

STATEMENT OF THE WORKING OF THE COPPER ORE MINES.

Produce of the mines in 1842	Tons of copper ore.	£	s.	d.
1842	20,145 0	Sold for	224,595	16 1
1843	20,314 16	"	242,317	10 5
1844	22,396 4	"	238,820	14 6
1845	17,468 11	"	193,417	7 11
1846	15,391 9	"	163,601	8 7

[To be concluded in next week's *Mining Journal*.]

The Miners' Manual, and Shareholders' Guide.

BY J. Y. WATSON, ESQ., F.G.S.

TRELEIGH CONSOLIDATED MINES, in the parish of Redruth, Cornwall; divided into 5000 shares—6l. per share paid up—market value, 4l.; conducted on the old scrip system. Directors in London, C. H. Ashley, Esq., G. Downes Carr, Esq., G. Thomas, Esq.; secretary, Mr. W. Nicholson; London office, 57, Old Broad-street; manager in Cornwall, Capt. W. Richards, Redruth. The sett, which comprises two distinct mines, Christos and Good Fortune, is held on lease for 21 years, from Dec., 1845 (a new lease having been granted), at 1-16th dues. Operations were commenced in 1836, and the returns in copper, to the present time, amount to 71,250l. The present returns are about 220 to 240 tons per month, at a cost of about 900l. The last sale of ore left a profit of 1200l. on the month's working. The profits divided among the shareholders amount to 1500l.; the dividend having been declared in April last, and another of like amount will be made in July next. Meetings of the adventurers are held every three months. The deepest shaft is at Christos, and now 110 fms. deep; Garden's shaft is 99 fms., and Good Fortune 70 fms. deep. In the 80 fm. level, at Garden's shaft, 50 fms. of ore ground have been laid open—worth from 35l. to 40l. per fm. The machinery is most efficient; and, altogether, this mine may be said to be one of the fairest speculations of the day.

WEST WHEAL JEWELL, in the parish of Gwennap; in 3725 shares—11l. per share paid—market value, 2l. Directors in London, J. Heron, Esq., W. Barnden, Esq.; secretary, Mr. W. Nicholson; London office, 57, Old Broad-street; there is also a committee of management in Cornwall. The mine is held on lease for 21 years, from March, 1835, at 1-12th dues—but the dues have been since reduced, both for tin and copper, to 1-24th, during pleasure. The returns, to 1st May, 1847, have amounted to 59,900l.; the monthly cost is about 750l., and which is about met by the returns. The mine is situate in the midst of a rich mineral district, adjoining Old Wheal Jewel (which has left 100,000l. profit); but, to the present time, has disappointed the expectations of the shareholders.

SOUTH YEOLAND, in the parish of Linkingborne; divided into 128 shares. Total expenditure to the end of 1846, 2954l.; market value, 20l.; conducted on the Cost-book System. E. A. Crouch, Liskeard, pursuer and manager. The sett, which is 400 fms. on the course of the lode, is held on lease for 21 years, from Sept., 1842, at 1-15th dues—the lord being Mr. B. Doidge. Operations commenced in Sept., 1842, and the outlay for labour has been 2508l. 9s. 9d. The mine is worked by water-power, and only 11 persons employed—adjoining Tokenbury to the north; it is also supposed to have some of the Tokenbury lodes westward. One of the most promising lodes discovered in Tokenbury, and which, by dialling from South Caradon, was found to answer best to the direction of their main lode—happening to run near the boundary of Tokenbury and South Yeoland, parts of each sett were consolidated, under the name of 'Yeoland Consols,' which is worked by a water-pressure engine; and the lode by it has been explored to a depth of 50 fms. under adit. The expenses of this mine are very light.

WHEAL HOPE is in the parish of Zennor, near Penzance; in 109 shares; outlay 2954l., to the end of 1846; conducted on the Cost-book System; pursuer, E. A. Crouch. Held on lease for 21 years, from 1843, at 1-18th dues—Messrs. Stephens and others lords. The mine is in the same kind of ground as Botalack and Levant, and has lodes of the same character—on one of which a shaft has been sunk 60 fms. under adit, and the lode is being extended on and found large—containing some ore. On a north and south lode an adit has been extended above 100 fms., in which a small course of ore, of the same kind as is met with at Levant, was discovered. This mine is worked at little expense, there being sufficient water-power both for pumping and drawing the stuff. N.B.—Since the above was written, nine shares have been relinquished.

[To be continued in next week's *Mining Journal*.]

ACCIDENTS.

Oak Farm Iron-Works, Kingwinford.—As J. Brown was working at the forge as ball furnace-man, and pulling at the slab with an iron bar, having a hook at the end, the hook slipped off, and the iron went with great force against his belly, which was so severely injured, as to cause his death.

Bickershaw Collieries, Leigh.—On Saturday last, a sheet was placed by some of the men across the pit—on the Monday, the ventilation was very imperfect, and, as G. Taylor, and a boy as drawer, went to work, he lifted the sheet, and the foul air being immediately ignited by the candle, a tremendous explosion ensued, severely injuring both.

Lumley Pit, Durham.—An inquest was held at Lumley Thicks, on R. Moody, pitman, who, about three weeks ago, whilst at work in the stone-drift of the second Lumley pit, was burnt by an explosion of gas which had issued from the roof of the pit, whilst he and his fellow workmen were absent "baiting." He was of a weak constitution, and the burning caused a shock to his nervous system, which terminated in his death on Saturday last.

Dowlais Iron-Works.—R. Brown was crushed between two limestone trams Swansea.—John Lewis fell down "John Lewis's pit," and was killed.

Ridale Iron-Works.—J. Smith was crushed between two waggon.

Walker Colliery.—G. Thompson fell down the pit, and was killed.

Neworth Chemical Works.—W. Fearn was killed by the explosion of a retort.

Delabole Slate Quarry.—J. Heard had his skull fractured while blasting.

Bunn's Lane Colliery, Dudley.—As T. Stone was smoking his pipe, a large lump of coal fell from the roof and killed him.

Messrs. Addebrooke's Colliery, near Darlaston.—C. Smith was killed by a fall of stone and coal, from imprudently going into a part of the workings which had been closed for their insecurity.

Moat Colliery, Tipton.—J. Budworth, aged 11 years, met with his death in the following manner:—It appears there is a scaffold erected in the middle shaft of the pit, for the purposes of getting the "brooch" coal, from which a gateroad is driven out into the working of the pit. On the morning of the day mentioned, the deceased, along with five men, got into a skip, and descended the pit, and on coming to the scaffold the skip stopped as usual, and alighted on it. The deceased then stepped out on the scaffold, thinking he would get footing; but he fell into the pit beneath, a depth of about 80 yards, and must have been instantly killed—for, on being brought up in about half an hour, he was found to be dead. All the others escaped, although one of them, at least, had his foot on the scaffold ready to step out, when he saw the unfortunate boy miss his footing and disappear. It was found that the brickwork of the shaft had given way under the rafters which supported the scaffold, part of which had fallen into the pit.

Cradley Forge Works, near Cradley.—A boiler, belonging to Messrs. Evers, exploded from the high pressure of the steam, severely injuring 8 men and a child.

Mountain Main Colliery, between Chorley and Wigan.—As six miners were working a vein of coal about 90 yards from the bottom of the shaft, they were buried by the falling of a mass of rock. Some companions endeavoured to extricate them, when two men and two boys were taken out quite dead, and the two others dreadfully injured.

Marsh-lane, Eckington.—As C. Owen, aged 15, was looking up the pit in which he was employed, a piece of coal fell and killed him.

High Tor Works, Matlock.—W. Oliver was struck over the leg and foot by a fragment of rock, while blasting—he lies in a very precarious state.

Broomside Colliery.—Newrick Ransom was killed here by a fall of coal.

Another Dreadful Sacrifice of Life.—On Wednesday last, an explosion of carburetted hydrogen took place in the collieries of Messrs. Speakman, Caldwell, and Co., Gerard's Bridge, near St. Helens, by which eight men have, no doubt, lost their lives. Between three and four o'clock in the morning, 60 men and boys, and 13 ponies, were at work in the pit, and at seven o'clock the explosion took place; immediate means were taken to extricate them, and all were got out safe but eight of the number and three ponies, who were at work 1000 yards from the shaft, and were, no doubt, suffocated. The coal caught fire, and on Thursday was burning with great fury.

Last night, intelligence was brought to this town that Croft Pit was on fire, and that four lives had been sacrificed. The pit was ascertained, when on the eve of going to press, was on fire, but the loss of life, at that time, was not exactly known.—*Whitehaven Herald*.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—The 18 fm. level end west is worth about 181 per fm. a rise about 5 fms. behind this end has improved, worth from 181 to 201 per fm. The 19 fm. end west is worth about 121 to 141 per fm.; the slopes from this, to the 18 fm. level, perpendicular, are worth from 141 to 161 per fm.—The ends are also worth the same. The winze, sinking under the 18 fm. level, on middle lode, is looking rather better; the lode is very regular, with lead thinly disseminated through it, but small; the ground is precisely the same as over the level, very congenial to lead. We commence on Monday to sink another surface shaft, to communicate with the adit end east, which will enable us to hole this level in quicker time with Nangle's shaft, and the workings eastward. At Clon Mines, we have discovered nothing further of any importance.—THOMAS ANNOVE; G. WHITE: May 28.

REDFORD UNITED.—At Wheal Marquis, the lode in the sump winze now 4 fms. under the 80 fm. level, is 3½ ft. wide, and worth 181 per fm.; there has been no lode taken down in this level east since last report. In the 70 fm. level east the lode is 18 in. wide, composed of spar, mundic, and ore. The lode in the 58 fm. level east is 18 in. wide, spar and mundic. At Liscombe, there is no alteration in the adit level east, or rise, in this level; the lode in the south engine-shaft is 3 ft. wide, still producing saving work; the lode in the adit level is 18 in. wide, composed of spar, mundic, and spots of ore in places. We weighed, at Morwelham, on Friday last, March ores, 118 tons 12 cwt., and sampled April ores, computed 118 tons.—J. PHILLIPS: June 1.

CALLINGTON.—In the 125 fm. level, both north and south, we are driving through ground of a promising description; the back will set at a moderate tribute. In the 112 fm. level south, the lode is 18 in. big, spotted with silver-lead ore; in the winze, sinking below this level, the lode has not been taken down. In the 100 fm. level north, the lode is 1 ft. big, intermixed with silver-lead ore; in the south end no lode has been taken down. In the 90 fm. level north, we are opening tribute ground; the south end has been suspended, the men being engaged sinking a winze in the bottom of this level, near the present one. The 80 fm. level north is also stopped for the time. At the north mine, in the 100 fm. level south, we are opening ground that will work at a low figure; the north end is driving through tribute ground. In the 90 fm. level south, the lode is 1 ft. big, composed of white iron, mundic, and lead—we expect to hole a winze upon this level, in the course of a week or ten days. In the 70 fm. level east, we are in the cross-course. In the 40 fm. level, the ground is favourable for driving; to the east of the cross-course, at Kelly Bray, the water is decreasing, the ground intermixed with branches, dropping into the lode, producing copper ore.—J. T. PHILLIPS: May 31.

COATLITH HILL LEAD MINES.—Within the past week, we have sunk a shaft down about 1 fm., and the vein is considerably enlarged since my last report, with a great deal more ore in it; the vein is still principally composed of a strong rider of good ore and mineral clay, with very kindly prospects. I was into the level on Saturday, and found a large quantity of stuff had fallen down into it from the back and sides; but, as soon as we get that cleared, we shall be able to commence driving towards A shaft, and, in my next, I hope to give more particulars.—W. PAUL: Alston Moor, Cumberland.

CUBERT SILVER LEAD.—We have just now concluded the pay for April, and the public setting for June—the particulars of the latter you have, as usual, forwarded by this post. We have commenced sinking the engine-shaft, and have sunk 4 ft. below the 35 fm. level. In the 35 fm. level, going east, the lode is large, and exceedingly wet (2 to 3 ft. wide), composed of spar, mundic, and saving work for lead—a very promising level; going west the lode is about 18 in. wide, and ore throughout—kindly. In the 25 fm. level west the lode is 1 ft. wide, soft spar, mundic, and lead; going east, in this level, the lode is 2 ft. wide, yielding some good saving work. In the 15 fm. level east the lode is 2 ft. wide, gossan, with stones of lead. We have set today 11 pitches, employing 30 men, on tribute, varying from 11.9s. to 61. per ton.—RICHARD ROWE: May 28.

CWM SEBON MINE.—The 60 fm. level west has ore 1 ton 10 cwt. to a fm.; the 60 fm. east has 15 cwt. to a fm., with 40 oz. of silver to the ton of lead, and 70 per cent. of lead to the ton of ore. This mine, if largely extended, would afford a good return; the vein increases as the mine goes down, and looks promising for a good mine in depth.—J. VIVIAN: Cardigan, June 1.

DEVON AND COURTENAY CONSOLS.—In the absence of Capt. Job occasioned by an alarming illness, I beg to send you a report of the present operations of the mine. We have cut a lode in the 30 fm. level cross-cut, in driving north 9 fms. 4 ft. from the engine-shaft, the underlay of which is 14 m. per fm. south, and is of a very promising character—3 ft. wide, composed of spar, peach, mundic, and copper ore, with a flooken 3 in. in width, on the north wall of it; we are now driving west on the course of the lode. In the deep adit on the south lode, we are still driving north on the cross-course, but as yet we have been unable to meet with the lode. There is a considerable improvement in the adit on the north lode since last reported; the lode is 3 ft. wide, composed of spar, flooken, lead and copper ore.—E. NORTHLEY: June 1.

DEAN PRIOR AND BUCKFASTLEIGH.—In the 30 fm. level west, the south part of the lode is composed of a branch of soft spar, near the south or hanging wall. The 40 end is suspended for the present, I have put the men to open on the ore part of the lode east and west of the winze; in stopping in the bottom of the 40, the ore part of the lode is about 16 in. big, saving work. In taking down the lode in the 50 fm. level, I find the lode to be somewhat improved, 20 in. big, good saving work; this is the south part, being of a promising character to the west of the slide course.—H. CHOAKE: June 1.

DRAKE WALLS.—Since my last report, our mine has much improved, and the prospects are cheering. The 40 fm. level, under the arch, east of engine-shaft, with bottom and top stopes, are producing good work. The 50 fm. level, east and west of machine shaft, with stopes in back, are also producing very good work. The 38 fm. level, under the arch, east of machine-shaft, is worth 161 per cubic fathom at present; the stopes, behind this end, about 3 fms., are also producing good work; the stopes at footway shaft are producing good work. We shall exceed 20 tons of tin for the last eight weeks, and shall sample it either the 5th or 7th of June next; and, from present prospects, I believe we shall sample considerably more the next two months. The new crusher is at work, and answers the purpose admirably.—R. WILLIAMS.

EAST CROWDALE.—The sumpmen have been engaged the past week in furnishing the plat, dividing the shaft, &c., which, I am glad to say, is in a very forward state; we are now going to put in bearers and cistern, and fix new lifts; the shaft on the north lode, at Rix Hill, is harder than it has hitherto been—the lode, having increased in size, is now upwards of 2 ft. wide, composed of capel, peach, mundic, and good spots of tin; the ground in the adit level, towards the Rix Hill lodes, is rather harder than it has been. We have cut a branch, underlying south, which is letting down water, and indicates that we are not far from a lode still north of the one our shaft is sinking on. We have seen a lode at the surface, between the two lodes previously seen, which contains excellent work for tin, and will, no doubt, make a course for tin where these lodes concentrate, which will be about the depth our adit will come.—S. PAUL: May 29.

EAST TAMAR CONSOLS.—At Whitton, the men in Hitchins's shaft have commenced sinking under the 64 fm. level; the lode in the 64 fm. level north is 14 in. wide, work of a coarse quality; the lode in the 64 south is 18 in. wide, good work. The lode in the 60 fm. level north is 15 in. wide—fluor-spar, mundic, and ore, saving work; the lode in the 60 south is 18 in. wide, a very kindly lode. The lode in the 54 north is still in shdy ground; the lode in the 54 south is 20 in. wide—capel, spar, and silver-lead ore. The lode in the 46 south, from Gourd's shaft, is 2 ft. wide—fluor-spar and ore, saving work. At Purzehill, Harrison's shaft is sunk 23 ft. under the 46 fm. level—the lode therein is 2 ft. wide, a very kindly lode; the lode in the 46 north is 20 in. wide, saving work; the lode in the 46 south is 2 ft. wide, work of a good quality. The lode in the 38 fm. level north is 15 in. wide—fluor-spar and ore; the lode in the 38 south is 20 in. wide, producing good stones of ore. At Charlotte's, the shaft is advanced to the 11 fm. level—the lode is driven north from the shaft 10 fms.; the lode therein is 2½ ft. wide, fluor-spar and silver-lead ore—a very promising lode.—B. ROBINS: June 1.

GREAT MICHELL CONSOLS.—The engine-shaft is down below the 22 fm level 12 fms. 2 ft., the lode in which is composed of spar, mundic, fluor, and stones of ore. In the western winze, the lode is without important alteration, producing stones of grey, black, and yellow copper ore.—T. RICHARDS: June 1.

GUNNIS LAKE.—At Chilworth, the lode in Bailey's engine-shaft remains without alteration, 3 ft. wide, and producing good stones of ore. In the 12 fm. level west we are driving north in the great cross-course; and in this level east we are still driving south.—W. RICHARDS: June 1.

HAWKMOOR.—The lode in the 15 fm. level, east of Hitchins's shaft, is upwards of 2½ ft. wide, producing good stones of ore.—P. RICHARDS: June 1.

HEIGSTON DOWN CONSOLS.—The lode in the 20 fm. level, east of north shaft, is 2½ ft. wide, composed of peach, spar, and tin—very good work, and very promising; in the 20 fm. level west, there has been no lode taken down.—W. RICHARDS: June 1.

HOLMBUSH.—The diagonal shaft is sunk 5 fms. 2 ft. below the 120 fm level, in which are five small branches, composed of spar, copper, and mundic; separated from each other at an average distance of 10 in., and nearly perpendicular. The lode in the 120 fm. level, west of the great cross-course, is 12 in. wide, composed of hard spar, mundic, and spots of ore; the lode in the 120 fm. level, east of Hitchins's shaft, on the north part, is 12 in. wide, composed of mundic, kilaas, and spots of ore. The lode in the 110 fm. level, east of Hitchins's shaft, on the south part, is 10 in. wide, composed of spar and stones of ore; the lode in the 110 fm. level south is 16 in. wide, composed of fluoken, spar, and stones of lead—saving work. The 109 fm. level south, on the lead lode, is for the present suspended, and all the men (six in number) put to rise above

the back of this level to make a communication with the 90 fm. level, for ventilation, and to lay open the ground—there is not a sufficient quantity of air to pursue both objects at one and the same time; the lode in the rise, above the back of this level, is 2 ft. wide, composed of spar and stones of lead, worth 61. per fm.; the rise is 6 fms. 4 ft. above the back of the level when the communication is made; the 100 south will be resumed by six men as before. The lode in the 90 fm. level south is 2½ ft. wide, composed of spar, priam, fluoken, and spots of lead; all the lode is saved, and will undergo the process of stamping. We weighed, at Calstock Quay, on Friday last, April ores, 83 tons 8 cwt.; and sampled May ore, computed 73 tons.—W. LEAN.

LEAM.—Since my last report, we have cut another branch, or lode, in the 67 fm. level, west of Robins's shaft, which has a very kindly appearance, spotted throughout with mundic and copper. I stated in my last, that the branch we cut in this end had heaved Robins's lode; to the north this lode has also made its appearance, and is looking much better than I anticipated when first cut. Our taking-day was on Saturday last—price for driving, 61. 5s. per fm. I have also set the plat to cut to the same part of men that are driving the end—the plat to be made 10 ft. long, 9 ft. wide, and 7 ft. high, the price 81. and as soon as the plat is finished, I would recommend driving either at the bottom of the shaft or on the lode that we have lately cut under Brown's shaft; I am of opinion that we should not drive many fathoms before we should relieve the water from Brown's shaft. The lode east at the 67 fm. level, is about 2½ ft. big, principally priam and spar—price for driving, 61. 5s. per fm. The lode in the 42 fm. level is just the same as when I wrote last—price for driving, 61. 10s. per fm. I am happy to inform you, that by clearing the attle, it has greatly relieved the bottom levels of the foul air.—JAMES SPIAGUE.

KIRKCUDBRIGHTSHIRE.—Having gone through our monthly setting for June, I beg herewith to hand you a list of prices, and statement of our prospects. The lode in the end west, at the 40 fm. level, is 3 ft. wide, with a little lead, but on the whole poor—set to six men, at 31. 15s. per fm.; also set the plat to cut at this level, to six other men, at 131. the job. The lode in the end west, at the 30 fm. level, is 4 ft. wide, with a little lead, and indications of an improvement—set this to six men, at 51. 5s. per fm.; the lode in the end east, on the canter, is 4 to 5 ft. wide, and is being impoverished by a horse of ground; the latter, however, is declining, and there are indications of an increase of ore under it—set this end to six men, at 31. per fm.; the lode in the rise of the junction continues large as before, but not quite so productive, say worth 251. per fm.—set this to six men, at 61. per fm., to be carried 9 ft. long—this rise is now 2 fms. 4 ft. 2 in. above the back of the 30 fm. level. The lode in the 20 fm. level west is 4 ft. wide, producing 1 ton of lead per fm.—set to six men, at 31. 15s. per fm.—we consider this end to be within a very few feet of the junction. The stopes west of shaft are not so good as last reported—set at 55s. per fm.; those east continue good (not taken at 11. 12s. 6d.). We have set six men to rise in roof of an old pitch, in back of the 30 fm. level, and six others to sink from surface over them, at 31. per fm. in each place, to effect a better means of ventilation. We have about 7 fms. of ground to cut, which I trust will be done in a few days, and thus answer the purpose much required. The Mary is engaged to ship our ore on Tuesday next, at 141. the run; computed about 35 tons.—J. BUZZO: May 29.

LANIVET CONSOLS.—In the 80 fm. level, west of Elizabeth shaft, we have cut into the lode 2 fms., and are not through it; its general character is much as last reported, producing capel, spar, and good stones of yellow ore; in the 80 fm. level east, remains much as last reported; we hope to complete the diagonal shaft to the 80 fm. level by the end of June. In the 30 fm. level, east of Elizabeth shaft, the leader part of the lode is 1 ft. wide, producing saving work; we have commenced to sink a winze below this level, the lode, or leader part, is 2 ft. wide, a good ore lode.—H. WILLIAMS.

LEWIS.—I beg to inform you, that I think our present prospects are equally as cheering as ever they have been, more particularly in the 50, east of tin shaft, on north lode, where we have a good lode 3½ ft. wide, worth 161. per fm. for tin; and the 50 east, on south branch, is a good end, worth 101. per fm. for tin. The 40 east, on north lode, is also a good end, worth 81. per fm. for tin. All other places are much the same as when last reported, as R. Hodgson, Esq., and Capt. Paul, were here yesterday, and they intend to see you in a very short period. I expect they will be able to give you a very satisfactory account respecting the above mines. I believe Mr. Hodgson is quite pleased with our proceedings, and with the prospects in general.—S. NORRIS: May 29.

MENDIP HILLS.—The appearance of the lode in the 38 fm. level, south of Stainsby's shaft, continues much the same as it has been for several fathoms past, chiefly composed of white spar and fluoken, intermixed with particles of lead; the ground is rather harder for driving than it has been; in the winze, sinking below the level, we are down 1 fm. 2 ft., where the lode continues in a disordered state, composed principally of quartz and limestone—ground favourable for sinking. Our operations in the slag department, during the past week, have been very favourable. The carpenters are still making launders as fast as possible—60 fms. of which are laid down.—F. G. HAMPUR: May 31.

SILVER VALLEY.—At the engine-shaft, the 50 fm. level, cut towards the tin lode, is driven 3 fms. 3 ft. 6 in., and the ground continues favourable. At the silver mines, the lode in the 30 fm. level west is still divided into two parts; the south or main branch has, in the past week, considerably improved in size and appearance—being now about 15 in. wide, and containing spots of silver-lead ore. The lode in the 20 end west is about 20 in. wide, composed of fluoken, carbonate of iron, mundic, and friable quartz, with spots of rich silver lead ore, and has a very promising appearance indeed; the lode in the stopes, in the back of this level, is about 22 in. wide, producing some saving work. At Wheal Brothers, the deep adit we have now cleared and secured 98 fms. from the western winch-shaft, and can get in over the ruins as far as the end, which we expect is near Oak shaft.—L. RICHARDS: May 31.

SOUTH TAMAR UNITED.—The shaftmen have been engaged the past week in cutting ground for bearers and cistern, which work will be completed by to-morrow, when we shall fix our first lift, and drop our second lift to the 40 fm. level, if possible. The men in the adit level are clearing and securing the level very satisfactorily.—B. ROBINS: June 1.

SOUTH WHEAL TRELAWEY.—We have this day set the engine-shaft again to sink at 121. per fm., to 9 men (extent for the month), to commence working on Monday mornings early until late on Saturday nights; we calculate upon sinking upon 2 to 3 fms. a month. Sobey's lode, in the adit level south, is 2 ft. wide, composed of beautiful gossan, barytes, soft spar, and kilaas, with particles of mundic and lead; we have 5 fms. further to drive this level south to get opposite the cross-cut driven west from the shaft, and 3 fms. 3 ft. to drive west from the cross-cut, to intersect the lode, agreeable with the present direction of the latter, where the communication will be made; we have set the work to 6 men to perform—viz.: the cross-cut to drive west to intersect the lode, at 41. 10s., and the adit level south, on the course of the lode, at 21. 10s. per fm., which work will be accomplished next month; a large stream of water will then be taken up at the adit level, that we are now obliged to draw to surface. I would also beg to remark, our engineer is getting on with the work of the engine in a very satisfactory manner, having fixed in their respective places all the heavy work, such as the bob, cylinder, boiler, cistern, &c.; no doubt exists of the engine being all completed some considerable time; we shall want to set her to work, for after the communication is made in the adit level, the shaft men, we believe, will be able to sink 8 or 10 fms. below the adit with barrels, seeing nearly all the water we have at present to contend with is coming from, and a little above, that level.—W. LEAN: May 29.

TRELEIGH CONSOLS.—In the 110 fm. level, east of Christo's, the lode is about 2 ft. wide, with stones of ore; it has a very promising appearance, but too near the cross-course to calculate on mineral wealth from the upper levels. In the rise, above the 100, east of ditto—this ground includes end and rise—the lode is 20 in. wide, worth 61. per fm.; this will be holed in 12 or 14 days, should the ground prove favourable. In the winze, below the 90 east, the lode is 20 in. wide, but poor for ore, producing occasional stones of ore; Garden's shaft, below the 90, is very hard and wet; in the 90, west of ditto, the lode is 20 in. wide, but not much ore, but looking more promising than it has through the past week. In the 80, west of ditto, the lode is 3½ ft. wide, worth 121. per fm.; in the 80, east of ditto—this driving includes rise and end—the lode is 2 ft. wide, worth 801. per fm.; the lode in this is likely to improve. The winze, below the 70, east of Garden's (new), will be sunk on the rise above the 80, at present it is worth about 51. per fm.; the 70, west of Synon's, is stopped in bottoms 7 fms.; the lode in this is 4 ft. wide, capels, poor for ore. In the 60, west of ditto, the lode is about 2 ft. wide, worth 61. per fm.—rather more promising. In the winze, below the 60 west, the lode is 2 ft. wide, worth 61. per fm.; in the adit east, on Wheal Parent lode, the lode is 2½ ft. wide, producing good stones of ore, and shall save a part of it to dress; it has in the week rather improved.—W. SYMONS: May 28.

UNITED HILLS.—In the 90 fm. level there has been nothing done for the past week, in consequence of the water being in. In the 80 fm. level, eastern end, the lode is 3½ ft. wide, worth 161. per ton; west of cross-cut the lode is 2 ft. wide, worth 101. per fm. In the 70 fm. level the lode is 3 ft. wide, worth 91. per fm. The 60 fm. level is suspended since August last; in the shallow adit the lode is 3 ft. wide, worth 61. per fm. At Wheal Charles, in the 40 fm. level, the lode is 2½ ft. wide, worth 51. per fm. At Wheal Sparrow, in the 40 fm. level, the lode is 2½ ft. wide, worth 61. per fm. In the 30 fm. level, in the end, the lode is 6 ft. wide, worth 121. per fm.; the lode in the winze is 6 ft. wide, worth 101. per fm.—this winze is not looking so well as when last reported. In the 20 fm. level no lode broken for the past week. The water has been in the 90 fm. level during the past week, in consequence of the boilers leaking, and putting down a new plunger pole. We hope to be in for by to-morrow night, or Thursday morning.—T. THREVENEN & L. WILLIAMS: June 1.

WEST WHEAL JEWEL.—In the 115 fm. level east, on Wheal Jewel lode, the lode is 18 in. wide, worth 31. per fm. In the winze, in the bottom of 100 east, on the same lode, lode 18 in. wide, composed of spar, mundic, and a little ore. In the 100 west, on the same lode, lode 9 in. wide, worth 31. per fm. In the winze, in the bottom of the 85 west, on same lode, lode 2 ft. wide, the lode is

looking more promising for ore than when last reported. In the 70 west, on the same lode, lode not looking so well as when last reported, now worth 41. per fm. In the 30, west of Quarry shaft, on Tolcarne tin lode, lode worth 101. per fm. In the 12 west, on same lode, lode 18 in. wide, worth 91. per fm. The winze, in the bottom of this level, is communicated to the 30 in the past week; the stopes, east of Quarry shaft, in the bottom of this level, are worth 251. per fm. In the 12, west of old sump shaft, on same lode, lode 3 ft. wide, worth 121. per fm.; in the 12 east, on same lode, lode 9 in. wide, worth 51. per fm. In the adit end, west of Quarry shaft, on same lode, lode 1 ft. wide, worth 101. per fm. In the stopes, east of Pryor's winze, in the bottom of adit level lode 3 ft. wide, worth 251. per fm.—R. JOHNS; T. BRAY: May 31.

WEST WHEAL MARIA.—The lode in the eastern engine-shaft is without important alteration; it is about 5½ ft. wide, 18 in. of the north part is saving work, and ore of good quality; this lode is rather troublesome in breaking, as there are so many veins in it, and pretty much water issuing out of them—so much so, that we cannot make that progress in sinking that we could wish. The western engine-shaft is down below the 54 fm. level 5½ fms.; the lode in this shaft is about 2½ ft. wide, composed principally of capel, spar, mundic, and a little ore; in the 54 fm. level, east of this shaft, the lode is about 2 ft. wide, with spots of ore in places; in the cross-cut south, at this level, the ground is much the same for driving as it has been for some time past, rather hard.—THOMAS RODDA: June 1.

WHEAL ADAMS.—We have nothing of importance to report this week, relative to the operations carrying on in the new engine-shaft; the nature of the work is such, that but a little can be done in a few days—at least, at the depth we now are in the fluoken vein; but passing this, less timbering will be required, and, consequently, the work will diminish. The workings in the 40 south are not yet resumed, for the reasons assigned in our last report. The cross-cut, extending west at the 28, south of the new engine-shaft, is in favourable ground, and now driving at 30s. per fm.; we have intersected the middle vein here during the past week, leaving ground which will work on tribute; we expect to reach the western lode in a fortnight from this time; the cross-cut, north of the old engine-shaft, extending in the same direction for the same purpose, is going on favourably; we have also intersected two branches at this point, both of which contain lead, and other indications of a promising character. Not having been able to continue driving the 18 fm. level north, we have appointed the men to drive west, to cut the lode 36 fms. further north than the end of that level, at 25s. per fm.; these three cross-cuts will be driven in a short time, and at a small expense, and will intersect the western silver-lead lode at these very important points, which will be sufficient to enable them to decide whether it will be worthy of a more extensive development or otherwise. The winze sinking in the 40, south of the new engine-shaft, is in a good course of lead, and the men are getting good wages at 4s. in the 12.—J. FRINCE: June 1.

WHEAL ANDERTON.—Having completed the preparatory work in the engine-shaft, we have commenced sinking it under the 60 fm. level, with as many men as is prudent to make the necessary dispatch, at 81. per fm. The lode in the 60 fm. level, west of the engine-shaft, is materially improved, being 6 ft. wide, with a leader of rich tin ore, from 16 to 18 in. wide; the other part all stamping work, although coarse. The tributers (two men) have risen 3 tons of tin this last month—two of which is ready for shipment, when I receive instructions from the purchaser. I find the piece of confused ground in the 60, east of the shaft, still retains its thickness, and has removed the lode north near 8 fms., agreeable to the dialing; I expect to cut it shortly, as I think we have cut through the eastern fluoken. The lode in the 50 east is 5 ft. wide, very regular, and producing a little tin; in the 50 west we are rising on the lode, toward the 40 fm. level—all of which is saving work, from 5 cwt. to 4 cwt. of black tin to 100 cwt.—12 gallon sacks.—J. CARPENTER.

WHEAL EMMA.—In sinking the engine-shaft below the 22 fathom level (which shaft is sunk to a depth of 9 fms. 8 ft.) in the bottom a lode has been intersected, composed of capel, mundic, and spar; in the course of a few days, or in my next report, I shall be able to state more particularly as to its size, &c.—H. CHOAKE: June 1.

WHEAL TRELAWEY.—Phillips's shaft is sunk 6½ fms. under the 42 fm. level. The lode in the 42 fm. level, north of Phillips's shaft, is 3 ft. wide, and worth 241. per fm.; in the same level south it is 3½ ft. wide, and worth 201. per fm. The lode in the 32 fm. level is the same as last reported, the men having been employed in rising against the winze sunk under the 22 fm. level. The stopes in the back of the 42 fm. level are looking very well, and the others much as usual. In Trelawney shaft very little has been done since my last, in consequence of breaking the flange of the door-piece and windrose, new ones have been put down, and the men are again sinking with all possible speed. Vivian's shaft is sunk 20 fms. under the surface, and on Friday last we set a cross-cut to drive west at that level to intersect the lode. The parcel of ore, computed 70 tons, was sold on Saturday last to the Combarmin and North Devon Smelting Company, at 141. 10s. per ton.—P. CLIMO, Jun.: May 31.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

You will be glad to hear that a discovery has been made in Penhall sett, of a course of lead, solid, 3 in. wide. This discovery was made in examining the face of the cliff, and as this lode is parallel to Wheal Golden lode, and only a few fathoms apart, the same will be cut in the latter mine by driving a short distance west. This discovery is of great importance to the adventurers in both mines.

COATLITH LEAD MINE (Cumberland).—We cut something like a flat in the vein this morning, which is turning out some rich work indeed, and we cannot tell what it may lead to.

DEVON AND COURTENAY.—In extending their cross-cut from the 80 fm. level they have intersected a very promising lode, on course of which they have commenced driving, fully calculating on a realisation of their most sanguine hopes.

NORTH ROSKILL.—The ends and levels are reported to be in much the same position as represented at the meeting, and that the next dividend will be about the same amount as the last.

RIALTON.—The lode continues to look very promising, and high expectations are entertained by the shareholders—few disposed to sell, anticipating an early discovery.

SOUTH WHEAL FRANCES.—The bottom levels, which were not so productive about a fortnight since, are now returning some rich work, in consequence of a fine course of ore coming in.

WHEAL TRYPHENA.—From the considerable improvement in this mine, it is stated that transactions have been effected in the locality at 8001. per share.

SILVER ORE.—Arrived in the Thames, on the 2d inst., off the Leith and Berwick Steam Wharf, East Smithfield, per *Audley*, from Cork, 338 bags of rich silver ore, which, as to richness, is considered a fine parcel. The above bags of ore are consigned to the smelting works of Messrs. Mullins, Battersea.

RIOSWIDDOL AND BACKNEIDON LEAD MINES.—These mines are situated about seven miles south-east of Machynlleth, about a mile north of the road leading from that town to Llanidloes; the expenditure up to the present time has been rather better than 20,0001. In 1845, a company was formed in 2600 shares of 101. each; but, afterwards, it was determined to issue only 2000, reserving the 500 for future issue, should it be deemed desirable. It is now proposed to complete Prosser's level, at a cost of 26941. when the principal vein of lead will be laid open in depth; and in doing which, as no reserves will be taken away, it is anticipated that 200,0001. worth of ore will be laid open to view. For the accomplishment of this desirable object, it was resolved to issue the 500 shares at par, payable by instalments of 10s. per month, and that the preference be given to the original shareholders; and allowing a mere trifling advance on the usual produce of ore—viz.: to 125 tons per month—this return would give a dividend of 10s. per share, which, on the new shares, will be equal to 16 per cent. Capt. Matthew Francis has made two reports on these mines: the latter dated April 27, 1847—in which he states that, since his last visit (6th April, 1846), Prosser's level had been carried on with much expedition towards the main working, in the body of the hill—it having been extended a distance of 70 fms. eastward from where it reached at that time; the lode, in the end of the level, is now strong and ore, but not rich; and there is a great deal of water coming from it. It was not improbable that that might be the western end of a longer piece of ore ground than could have been expected; and the favourable opinion he had formed of the ore ground generally of this mine being confirmed by the operations of last year, he was more convinced of the necessity of forwarding the work as much as possible.

WHEAL GOLDEN SILVER-LEAD MINING COMPANY.—This mine is divided into 512 shares, and it is estimated, on a liberal calculation, that all the necessary machinery and erections for draining the workings to the lowest (the 60 fm. level) can be completed for the sum of 44801. and that in six months tribute ground might be opened. The mine is situated on the estate of Penrith, in Ferranzabuloe, in Cornwall, and during its former workings, 15,0001. was expended, chiefly in underground workings. It was suspended in consequence of the very low price of lead in the market, and disputes which arose among the adventurers, while it was evident there was an intention of again working the mine, from the fact of all the pitwork, flat-roads, and other materials, being left in the shaft and levels, and are estimated as worth to the present company at least 7001. At the time of the abandonment, 50 tons of ore per month were being raised, the average produce of which was 72½ per cent. for lead, and 24 ozs. of silver to the ton of ore. The general opinion among mine agents appears to be, that by sinking 20 fms. below the 60 fm. level, and driving the levels to the courses of ore gone down in the 60, that permanent returns of 100 tons per month in the northern levels alone, exclusive of extending them south on the course of the lode. The sett is granted for 21 years, at 1-24th due.

NORTH WALES SILVER-LEAD, COPPER, AND GOLD MINING CO.

SIR.—Observing in your valuable paper of last week a letter from "A Working Miner," who, methinks, understands the pen better than the pick, in which he sorely complains of the report of Capt. Absalom Francis on the mines possessed by the North Wales Mining Company, I am inclined to try my hand at correspondence, if you will kindly give my letter insertion, knowing, as I do, some little of the district. The "Working Miner" deals so generally with the subject, that it is difficult to catch him on any one particular point; however, I will leave Mr. A. F. to answer for himself, while I confine myself to the practical details and to the imaginative ideas of a "Working Miner."

Having expatiated on the prospects, according to his opinion, of Clogau and Vigra, he asks "for what purpose machinery will be necessary, when the present workings at Vigra are on the summit of a hill, upwards of 800 feet above the level of the water, and Clogau 1200 feet, when adit levels might be driven for less expense, and at the same time proving the lodes much better?" Perhaps, Sir, your correspondent would, having made so accurate (?) a survey as to the height of the workings, kindly condescend to state what would be the distance required to drive a cross-cut to take any lode in Clogau or Vigra sett. I think he would be somewhat right, if I may anticipate his reply, in saying at the former a distance of something like 7920 feet would have to be driven—and, allowing the cost of ground to be 3d. per fathom, this would be attended with a cost of 3960d., exclusive of shafts for ventilation; and as it might be fairly estimated that six fathoms could be driven per month, it will be seen, that the time consumed would be, in round numbers, some 16 or 18 years. I, therefore, can well understand, if the "Working Miner" be one of the consulting agents, whose reports appear to have been adopted, and on which is founded the assumed application of so vast a capital, that really it will be required, and that Capt. A. Francis was in error in arriving at the conclusion that 10,000d. would be sufficient. Why, this sum could alone be well applied to salaries and agencies in the time. I will now, with your permission, say a word or two as to the former workings—having been engaged therein. Your correspondent says, they are but surface workings, being only 25 or 27 fathoms deep. Will he be kind enough to say, where the Clogau lode is in going west, or where the Vigra lode is in depth? The one is, I believe, lost, and the other, to say the least, is missing. He sadly complains of the bad management of working the mines by the past adventurers. Now, I have no hesitation in saying, that the body of adventurers who worked the mine some few years since, were most spirited; that the operations were conducted under the skilful and able management and direction of Capt. W. Gregor, Samuel Secombe, Theophilus Mitchell, and Faulk; and, as your correspondent has been connected with the district 20 years, he possibly was in some one or other core, and can tell us how the lode looked when the "bal" was "knacked?" "A little knowledge is a dangerous thing;" and, I fear, without your correspondent acquiring more, he had better forget that which he has obtained, or, at least, apply it to a better purpose than that of attempting to mislead.

London, June 1. A THEORETICAL NOVICE.

WHEEL ELIZABETH, LATE WHEEL CRESE.

SIR.—I have often been asked the question, "When is Wheel Elizabeth again going to work?" In reply to which I beg to state, that Mr. Edgcombe, of Tavistock, the purser, has been frequently applied to, both by letter and verbal application, by shareholders of considerable influence, but all to no purpose; he seems callous to every application—his only reply being, that as soon as the back calls (about 500l.) are paid, he will call a meeting. It appears Mr. E. stopped the mine on his own responsibility, and without any authority from the shareholders, while a more promising sett does not exist in the neighbourhood. Really, Mr. Editor, some steps should be taken to compel Mr. Edgcombe, either to give up the purser'ship, or at once to call a meeting of adventurers, and give some explanation. If this is not done, and that quickly too, I shall again call your attention to it.—A LONDON BROKER: London, June 2.

CANDONGA MINING COMPANY.

SIR.—Can you give me any information respecting the above-named company? There is, or ought to be, a considerable balance in hand; and, bearing in mind what transpired at the last meeting of proprietors, I am at a loss to understand why the concern has not been wound up, and the balance returned. If not in your power to afford the required information, the insertion of this in your Journal, or a remark from you to the same purport, may perhaps lead to an explanation.—A CLAIMANT: London, June 2.

HARROWBARROW OLD MINE.—The company held their meeting at Plymouth, on Tuesday, the 1st June, when the following report of the committee was read:—Since the last report, two small sales of tin have taken place, amounting to 154d. 18s. Another parcel will be sold on Friday next, and there remains on the floors as much as can be passed through the burning-house in the next three months. The burning house has been found altogether too small for the work it has to do, and it has not been deemed expedient to enlarge or erect another on this site, as proceedings at law were threatened against us from alleged injury to vegetation adjacent to it. From communications with and experiments made by Mr. Oxland, operative chemist, we find a second engine will not be necessary, as the present will be found sufficient to pump the mine and drive 36 head of stamps at least, which will, by his process of dressing, be equal to a very large amount of work. Your committee have met Mr. West on the mine, who there laid out necessary plans for the engine and floors; the specifications are daily expected from him. From the continued unproductiveness of the copper lodes, and a second accident to the piston-rod, which stopped the engine, and from reports of our own and other mine agents, your committee thought it desirable to suspend operations at this part of the mine, and now recommend the removal of all your plant to the Goodluck tin lode. They have availed themselves, on the recommendation of the agents, of an opportunity of obtaining at a cost of about 170d., the Harrowbarrow Consols sett and materials. This step they were induced to take in order to secure a large tract of land on the north, known as Mount Pleasant, and by this purchase your sett is considerably extended to the north and east, and three tin lodes of great promise added to the sett.—From the statement of accounts, it appeared that the balance from last account was 92d. 8s. 4d.; three months' cost (March, April, and May), 122d. 1s. 1d.; together, 137d. 9s. 5d. Creditor, by calls received, 736d.; sales of tin, 154d. 18s.; ditto materials, 238d. 4s.—1128d. 18s., leaving balance against the mine of 245d. 11s. 5d.—A report from Capt. Paul (the agent) was also read. After describing the various details of the workings, it stated, that 64 tons of tin were ready for market, and 5 tons in course of preparation, some portions of which had been sold at prices which show the tin to be of good quality; and Capt. Paul concluded by stating, that he had every reason to expect a good mine, when in proper course of working.—The shareholders agreed to receive and adopt the reports of the committee and captain; passed Mr. Carne's (the purser's) accounts; ordered a call of 2d. a share; voted thanks to the committee; resolved on the removal of the engine and plant to Goodluck; and voted thanks to the chairman, after which they broke up.

EAST CARADON.—At a meeting of adventurers, held at Webb's Hotel, Liskeard, on Monday, the 31st May, RICHARD FORSTER, Esq., in the chair, the accounts for the last nine months, leaving a balance due to purser (W. Forster, Esq.), were examined and allowed, and a call of 2d. per share made, for the further prosecution of the mine.—The following report was read to the meeting:—A whim is in the course of erection, and the engine or whim-shaft sunk, and rose on to the extent of 31 fms., having 6 fms. more to sink to hole to the back of the level, the men will then have good air to resume their workings in the winze under the adit, and to drive on the adit cross-cut—in both of which, as well as in many parts of the shaft, good leaders of grey, black, and yellow ore have been already discovered, and from which, by-and-by, great returns are anticipated. The adventurers are now in the highest spirits, there not being the slightest doubt but they will ultimately, and in all probability, very quickly prove to be equal, if not superior, to her neighbour, the adjoining mine, and on the lodes of the famous South Caradon, from which such large profits have been returned; 4704d.—viz.: 42d. per 112th share—have been already expended, and we can boast that the sum of 4d. only out of that amount remains unpaid.

PENANCE CONSOLS.—The first account of this mine was held at the Wellington Inn, St. Just, on Monday, the 31st May, when the accounts were examined and passed to end of April, showing a balance in hand in favour of adventurers of 92d.; there was also about 30d. worth of tin for sale on the mine. This sett has been worked unsuccessfully for some time past by a former company, under the name of Gear Brane, but were compelled to stop the workings, in consequence of not having steam-power to draw the water. The mine is now being worked by a spirited company, who have erected a steam-engine, and gone to a considerable expense for the efficient prosecution of the sett; after sinking about 5 fms. they cut a lode of tin, which has continued to improve every week, and is now worth about 40d. per fm.—the tin is of the richest description. This mine is situate in the parish of Sancreed, and promises fair to be a good speculation from the present favourable appearances.

PHOENIX MINES (near Liskeard).—A special meeting of shareholders was held on the 20th May, when it was resolved, that for the purpose of erecting the steam machinery, necessary to bring the mine forthwith into a profitable state of working, as recommended in the report of Capt. William Lean, as also by the resident agent (Capt. Samuel Secombe), a few additional shares shall be issued, applications for which, or for further information, may be made.—The report of Capt. William Lean, who had been requested to inspect the mine, was also read, in which he recommended the immediate alteration of the machinery, for the purpose of bringing the mine into full and effective operation.

WREAL GILL.—A meeting of shareholders was held at the mine, on the 20th ult.—W. Gloucester, Esq., in the chair.—The working of the mine was directed to be discontinued, the mine and materials to be sold, and the affairs of the company wound up without delay: Mr. W. Murray, jun., to act as auctioneer, and Mr. E. H. Pedler, of Liskeard, as solicitor.

CURRENCY CREEK SPECIAL SURVEY, SOUTH AUSTRALIA.

A meeting of landed proprietors in this speculation, was held at the London Tavern, on Monday last, for the purpose of hearing a report received from the colony, of the discovery of copper ore in the district, and to adopt measures in consequence thereof.—The meeting was numerously attended.

HANANEL DE CASTRO, Esq., was called to the chair.

The CHAIRMAN stated, that he, together with Mr. F. Friend, Mr. Gray, and Mr. Thompson, original shareholders, had thought it right to call this meeting to lay before them information they had received from their agent, Mr. R. W. Beddome, respecting the discovery of copper ore in September and December last, on the survey. In the first place, he, the chairman, thought it right to remind the meeting, that this society, called the Currency Creek Special Survey, was commenced under a Government grant of 5000 acres, in March, 1839, and the association dissolved on 28th June, 1841. At that period, the shareholders received a land grant for 40 rural, and 5 town acres for each subscribed share, with the understanding, that in future each shareholder would represent his own interest in the colony, and was so registered accordingly. The balance of money remaining at that period, after paying all expenses, together with some appropriate land, was, by resolution given over to them, to appropriate at their discretion, for the benefit of the survey in common, and the association was then dissolved. The confidence reposed in himself and colleagues at that period had been faithfully fulfilled, and by appointing Mr. Beddome to reside on the survey for three years, had led to them re-assembling this day, under favourable circumstances, as the report, he should have the honour to read them would confirm. The question that now would come before them, was whether it was their intention, on the information received, to re-associate themselves into an association, as before, reminding them they met to-day as individual and separate landed proprietors; nevertheless, his own opinion was, that unless the whole survey could be again brought under one management, he thought the apparent advantages held out could not be realised.

The CHAIRMAN then read the following letter from Mr. R. W. Beddome, and the report of Mr. Finke, respecting this discovery on their lands:—

Currency Creek Township, South Australia, Dec. 16, 1845.

DEAR SIR.—In the following report upon the New Mine, at Currency Creek, I take the liberty of addressing you, from your long connection with the special survey, in the heart of which the mine is situate, from your uniform kindness and frankness in giving me advice in my general agency, and from the circumstance of your having by far the largest amount of landed property in the district, under your control, which is represented by one individual. I have, first, to request, that you will do me the favour to communicate with other gentlemen, acting as agents for land here, or who may be proprietors of the soil themselves, in order that, if agreeable to the wishes of yourself and others, a preliminary meeting of persons concerned may be held; at which an attempt might be made to combine, for the purpose of a further investigation into the character and extent of the vein of copper recently discovered in this township. With respect to the discovery itself, chance having directed the observation of an inclined residual resting here to a blue line, under the water, at the head of the Salt Lake water, forming the lower division of Currency Creek, has raised from the spot a piece of stone—a soft slaty nature—containing the deposit, which, by its colour, had attracted my attention. This being submitted to me, in order that steps might be taken for its examination, I took it to Adelaide, and obtained information from a practical miner of its true character—verifying my own belief, that it was a fair specimen of blue carbonate of copper—in what mineralogists, I hear, term "talc slate."

I immediately determined upon the purchase of a knowledge of the locality whence the specimen was taken, on behalf of the trustees of the survey, in order to prevent a possible monopoly by individuals; and also to ensure, by due and properly-timed publicity, the full benefit to the whole body of the proprietors of the survey. I arranged this satisfactorily; and, I hope, with justice, as well as moderation, and immediately sent a report to Mr. H. De Castro, chairman of the trustees, of what steps I had taken; and I recommended to that gentleman, a further attempt to reunite the members of the late association of proprietors. I have also, lately, sent specimens of the surface indication to Mr. De Castro, and I beg to inform you, that your kind and friendly charge of them, stated, that you had forwarded them by Mr. Morphet. As you are aware, Sir, I made known publicly the fact of the existence of copper on the Currency Creek Township, and sent specimens for inspection to Adelaide. But, as, indeed, I had reported to Mr. De Castro, it did not appear to me, at first, that it would avail much to disclose the locality, until steps could be taken to reunite the proprietors, whose individual interests were so small, as to render nugatory any attempts to mine on separate and scattered properties. I had also taken upon myself the responsibility of further remunerating the discoverer, Mr. Finke, in giving him a high and favourable opinion of the quantity of rubies, and also to form a judgment of its probable direction. I send to you Mr. Finke's report to me, which I should be glad if you would show, together with my present communication—if you think it worth while—to other parties interested. Mr. Finke's report I should be glad of again, when I have the honour of seeing you. If, Sir, the agents of these properties could meet on a fixed day, I would, on due notice, attend to assist at a temporary amalgamation of our interests and those of our highly respected clients. It appears to me, that a sale of the mine, if possible, might be sufficient to open a shaft and gallery on either side of the Creek, to endeavour to intercept the vein of mineral disclosed from beneath the waters, by the bright finger of Providence, illuminating the dull and silent pool—too long typical of the state of the Currency Creek Survey; but which, I trust, soon will be productive of wealth, and teeming with life and energy.

The entire south rejoices in our anticipations of success, and will assuredly participate in the stirring changes that a mine always produces when it becomes a permanent investment for invested capital—the blood of a state. I have the honour, &c., To B. M. Da Costa, Esq.

MR. FINKE'S REPORT.

Dec. 14, 1845.—In compliance with your wishes, I have made a cursory examination of the special survey at and near Currency Creek, and I herewith beg to submit to you my views in respect of its prospects for mineral riches. It appears to me that the country generally in the neighbourhood of it is of a mineral character, but it would require a much more minute search than I have been able to bestow upon it to determine its extent. The indication of copper which was found in the bed of the creek proved, on the slight trial made upon it, of a most promising kind; and I have no doubt, had we not been prevented by the influx of water making a further search, much superior and greater quantities would have been extracted by continuing the work for a couple of days longer. The ore found is the compact blue and green carbonate, the produce of which for copper is very considerable, and I make no doubt that they will be found to contain not less than 30 per cent. of copper on the average, and some of the specimens considerably more. From the experience I have had in this colony, I should confidently recommend that a fair trial should be made on the spot, which promises to be amply remunerative to the parties who might undertake it. The mineral is found in three or four branches, running about from 2 to 3 in. apart, but they appear to be converging, and I think, at perhaps 25 or 30 ft. depth, would be found to have joined, when they would form a fair sized vein, of from 8 to 12 in.; the branch from which the specimens were taken, is 3 to 4 in. broad, and the ore is embedded in a very favourable, soft, white, chalky prism; which, of all others in this colony, is the most desirable and kindly, and has been generally proved to be most productive for copper. The course of these veins, as near as I can judge, is from south-west to north-east, and these bearings would prove them to be in connection with the special survey of 20,000 acres taken on the Bremer, on which very rich deposits of copper occur. The situation as a mine is unexceptionable, there being abundance of timber and water on the spot, with an easy transport of the ore to the place of shipment at Encounter Bay.—W. FINKE.

The CHAIRMAN then produced samples of the ore forwarded to him, together with an assay that had been made, and the result was as follows:—the discovery of September produced 2 cwts. 3 qrs. 5 lbs. copper ore to 308 ozs. silver per ton; that of December, 87½ per cent. copper. The number of present proprietors, as far as he was able to ascertain, was 61—50 of whom were in London. He was happy to see so large a meeting, and would be ready to receive their advice, and any suggestion for working out this discovery. As the largest landowner in the survey, he could only say he was quite ready to throw the whole of his interest into one joint concern, and felt satisfied the information he had placed before them was entitled to great credit.

Mr. GRANGER read a letter from his brother, residing at Adelaide, in support of the discoveries; as also did Mr. LAWRENCE PHILLIPS, from his nephew, Mr. Phillipson, confirmatory of the discovery, both recommending a reunion of those interested in the survey.

The CHAIRMAN read extract of letters from Mr. B. M. Da Costa, and Mr. Phillip Levi, both of Adelaide, to the same effect.

A PROPRIETOR asked, if Mr. Beddome was still considered as their agent. The CHAIRMAN replied, that Mr. Beddome's period of three years' service under salary had expired, and he now acted in capacity of a private agent. The trustees had little or no funds left to carry on the investigation with vigour, and that a sum of money would be required before further proceedings could commence.

Mr. M. D. LINDO thought it would be advisable to ascertain the feeling of the proprietors present, as to whether they would reunite as an association, and surrender their land grants into one common stock.

Some proprietors thought they might surrender their mineral lands, but not part with their title to the surface lands.

The CHAIRMAN then by name took the opinion of the shareholders present on Mr. Lindo's suggestion, when there appeared 22 proprietors willing to reunite as one common stock, and eight who, for the present at least, declined to join in such an association.

Mr. LINDO then proposed, that a committee of seven gentlemen should be appointed to consider what plan could be best adopted to carry out the views of the majority, which was seconded by Mr. WRIGHT, and carried unanimously.

The committee was then named as follows:—Hananel De Castro, F. Friend, R. T. C. Gray, J. R. Thomson, C. Roberts, R. A. Hussey, and Steph. Wright.

The CHAIRMAN promised to call another meeting, if possible, within one month, and thanks having been voted to the Chairman, Messrs. Friend, Gray, and Thomson, the meeting adjourned.

PACHUCA MINING COMPANY.

The third annual general meeting of proprietors was held at the offices, Duke-street, Adelphi, on Tuesday, the 25th May.

Sir ROBERT PRICE, Bart., M.P., in the chair.

The circular convening the meeting having been read, Sir Robert Price, Bart., M.P., was re-elected a director of the company, and George Bowness Carr, Esq., an auditor, in the room of Richard Williams, Esq., deceased. The report of the directors, and the statements of receipts and disbursements to the 31st Dec., 1845, were then read.

RESOLUTIONS.

By the account which accompanies the present report, the shareholders will observe that, during the year 1845, the sum of £12,019 7 1 was expended in carrying on the works of trial in the company's mines. As noticed in former reports, the principal penitencias, or mining setts, secured by the company, were those of La Esperanza, Santa Clara, and La Rejona, to which the mines of San Gabriel and Santa Susana were subsequently added. Of these, the mines of La Rejona and San Gabriel are abandoned, no ore of sufficient value having been discovered to render it advisable to incur any further outlay upon so barren. On a very wide vein, producing some good ore, the last account of the mine of Santa Susana was suspended in its progress, and the Grand vein, the last rainy season, with the intention of resuming the work at a future time. Thus the operations are, for the present, confined to the two penitencias of Esperanza and Santa Clara, which the directors now proceed to notice separately.

La Esperanza.—In this penitencia, the shaft of Esperanza commenced at the top of the mountain, was sunk to the depth of 151 varas, when further progress was stopped by foul air. The ventilation of the shaft was intended to be effected by the San Buenaventura, 95 vara level, which has been driven 177 varas from the eastern extremity of the penitencia; but a very little ore was discovered in its progress, and the Grand vein (the intersection of which was one of the objects in view) was found to take a course more directly parallel to that of Esperanza, it was considered expedient to suspend the level for a time, and apply the limited means afforded by the company to a trial of the western ground, where several large veins were observed to cross each other, and where a discovery of ore might reasonably be expected. Accordingly at this point, the junction of the several veins, it is said, forms altogether a width of 30 varas, a shaft, called San Guillermo, is now in course of sinking, having reached a depth of 41 varas, at the date of the last advice. The lode is described as being of a promising nature, composed of quartz and gossan, with spots of ore throughout, a small quantity of which has been saved. The shaft having been squared down, and a malacate erected to draw the stuff, the sinking is expected to go on at the rate of 1½ vara per week, a rate of progress which will lead to a speedy trial of the mine.

Santa Clara.—The shaft of San Pedro, in this penitencia, has been sunk to the depth of 100 varas, and a very wide vein, producing some good ore, has been discovered. The present it is being poor in the bottom of the shaft, but it is also remarked, that "seeing such a large lode, with ore thinly disseminated throughout it, there is a great probability of finding ore of richer quality and greater abundance at a deeper level." Stopes have been opened upon the ore ground, west of the shaft, and these, it is hoped, will afford some assistance in the prosecution of the work.

The expenditure will henceforth be limited to these two works of San Guillermo and San Pedro, which will be prosecuted with all possible despatch. It is calculated that 150d. per month will cover the whole expenditure in the company until the trials are completed, and this may be lessened, by the produce of the ore on hand (140 cargas), at the end of March, and that raising from the points above mentioned. In the month of January last, the directors called upon the shareholders for 10s. per share, and they have this day to announce a further call of 10s., making the total amount subscribed 4d. 10s. per share. The amount thus raised will suffice to the end of the present year; and there is every reasonable ground for believing that the estimate given in the original prospectus, of 2d. per share, as the outlay for fully proving the mines, will not be exceeded.

The confidence of the shareholders is respectfully solicited during the progress of the present operations, which, as above mentioned, are limited to two most encouraging mines, any moderate discovery of ore in which would soon repay all the outlay of the company.

The statement of receipts and disbursements during the year, showed the balance from last account as 898d. 18s. 9d.; third instalment, 1000d.—1898d. 18s. 9d.—By bills drawn from Mexico, 1300d.; directors' and auditors' salaries (less income tax), 150d. 14s. 8d.; secretary's salary, 50d.; rent and office expenses, 15d.; for printing, stationery, &c., 11s. 10s. 6d.; income tax, 4d. 10s. 6d.—1532d. 1s. 7d.; leaving balance at bankers, 366d. 17s. 2d.—The expenses at the mines during the year had been—management, 8277s. 5d.; tutwork, 27,111 3d.; stores and sundries, 5252s. 3d.—\$12,418 3d.—By produce of 140 cargas of ore from La Rejona Mine, 576s.—less reduction charges, 3369 3d.

It was then resolved unanimously—That the report and statement of accounts be received and approved, and circulated among the proprietors.

The thanks of the meeting were presented to the chairman and directors for their attention to the affairs of the company, and the meeting adjourned.

GREAT ROUGH TOR CONSOLS MINING COMPANY.

A special general meeting of shareholders was held, pursuant to notice, at No. 50, Threadneedle-street, on Saturday, the 29th May, to consider the propriety of working, as a distinct adventure, and under a separate management, the eastern portion of the Great Rough Tor Consols Mine setts, being that part held under a lease from G. Gillard and wife, and called Penedarn, and to pass resolutions accordingly.—W. S. THOMAS, Esq., in the chair.—The CHAIRMAN, having read the notice convening the meeting, stated, that at the request of several of the shareholders, the present special general meeting had been convened, the object of which was expressed in the notice just read. The expediency of the measure had originated in the alteration of the site of the engine-house from that proposed in the first instance; Mr. West, the contractor for the engine now erecting, proved that it could not be made to perform its duty so effectively, nor could the ground upon which the works had already been commenced, be so advantageously brought into operation, unless such alteration took place; at the same time, he was aware it would be ineffective for the eastern portion of the setts in question. This, however, was, in itself, of no importance, seeing that it would be necessary, in progress of the development of these extensive setts, to adopt an independent arrangement of machinery for some part or other of them, and the portion in question being held under a separate lease, the plan now suggested was better calculated to bring it into operation at an earlier period than it could otherwise have been effected. The lode has been cut within some fathoms of the boundary in all its characteristics of peculiarly splendid gossan and fine ore capels, which render it desirable that early arrangements should be made for its further development eastwards. There were other considerations involved, which might be of importance to some of the shareholders of the Great Rough Tor Consols. The vigorous measures adopted, to determine in the shortest possible period of time the value of these mining setts, have necessarily called for, and will continue to demand, a corresponding outlay of capital. The plan now proposed will afford an opportunity to shareholders to regulate their interest in either portion of the mining setts as may best suit their convenience.

In order to carry out these objects, the following resolutions were submitted to the meeting, and passed:—That it is expedient that the portion of the Great Rough Tor Consols Mining sett, called Penedarn, and held under a lease granted by G. Gillard and wife to F. S. Thomas, J. Thomas, W. S. Thomas, and Josiah H. Hitchins, should be worked as an independent concern, and separately from the other setts of the Great Rough Tor Consols.—That the new company be called East Wheel Rough Tor.—That the East Wheel Rough Tor be divided into 2048 shares, and that the shareholders of the Great Rough Tor Consols shall be entitled to four shares for each share held by him in the Great Rough Tor Consols Mines.—That Thomas Morris, Esq., of Grenofan, near Tavistock, be nominated the purser of East Wheel Rough Tor, to carry out the foregoing resolutions.—These resolutions having been submitted *seriatim*, were agreed to unanimously.

TINCROFT MINING COMPANY.

An adjourned general meeting of the adventurers was held at the offices, 44, Finsbury-square, on Wednesday last, the 2d inst.

PERCIVAL JOHNSON, Esq., in the chair.

Mr. STAINBY having read the advertisement, the CHAIRMAN observed that he believed he had not much to say on the occasion: the meeting would remember that at the last meeting, a wish was expressed that the mine books should be brought from Cornwall for the inspection of the auditors, and then was adjourned to this date, that Capt Paul should be present—that gentlemen was then in the room, and would answer any question which might be put to him on the state of the mine, and other matters. He then placed on the table the same accounts as were presented at the last meeting, which will be found in the Journal of 1st May last, and stated that they were now signed by the auditors. On moving their adoption, Mr. HEVLS said he thought they should allow the meeting a little breath to look over them before adopting them; he, as well as others, would like to hear the report of the auditors. After some time had elapsed, and the accounts had gone under an inspection of several shareholders, and at length adopted.—Mr. ISLEIN read a short report of the auditors, in which, while they gave every credit to the directors for the correctness with which the accounts were kept, they still thought, and recommended to the directors, that a proper set of merchants' accounts should be kept, so that the periods on which liabilities were incurred, the returns of ore, &c., should always correspond in the ledger and monthly cost-sheet, and not be spread over several months, as was now the case.

The CHAIRMAN explained that the accounts of the sales of ore could not always correspond with the month in which it was raised, as so much depended on the condition of the machinery, the weather, and other varying circumstances; the suggestions contained in the auditors' report, however, should receive the fullest consideration of the directors. A long conversation then ensued—during which, in answer to questions from proprietors, by the chairman and Capt. Paul, it appeared that, although dividends had not lately been paid, the mine had been regularly making profit; but, owing to the necessity which had arisen for putting the machinery of the mine into a thoroughly efficient state, the profits had been expended in the erection of a valuable new steam-engine, a new and powerful crusher, the best in the neighbourhood, and other work, to the amount of 3000d.—the machinery was worth fully four times the value of what they formerly had on the mine. There was a balance in hand to the end of February, of 1047d.; the profit for March and April would be about 800d.; and there was now no doubt of the mine making a regular profit, while it was not expected that any further expenses for machinery would be necessary. The chairman explained that though the mine would not prove a second "Maria"

as to profit, he had no doubt also would prove a very lasting one; and Capt. PAUL showed that, although the ground in Tincoft was hard, and the shaft diagonal on the underlay of the lode, which made the mine expensive to work—the mine was worked under the average expense of the neighbourhood.

The CHAIRMAN explained that the entire outlay on the mine had been £2,000, and that they had returned £30,000 in dividends; a hope was also expressed, that at the next meeting they should be in a position to pay another dividend. Thanks were then severally voted to Capt. Paul, the chairman, directors, and auditors, and the meeting separated.

DARTMOOR CONSOLS MINING COMPANY.

A meeting of shareholders, interested in the above undertaking, was held on the 20th May, at the offices of the company, 58, Lombard-street, when a deputation was formed, with instructions to proceed to the mines forthwith, and report thereon, for the satisfaction of the shareholders generally. This having been done, we have now the pleasure of furnishing the result of their important mission, which we have no doubt will be read with equal interest and gratification.

Having been requested, by several large holders of shares in this company, to visit the mine, and inform them what prospect of remuneration it offers, we accordingly did so on the 20th inst., and was highly gratified to find the works progressing in a very favourable and business-like manner. We, therefore, think it right to send you this report, that you may, if you think proper, publish it for the satisfaction of the general body of shareholders. We left Shepton on the morning, accompanied by Capt. J. Floyd, and other mining agents, for the purpose of thoroughly inspecting the mine. The distance from Shepton is about two miles, on a gradual and pleasing ascent. Upon arriving at the boundary of the mine, we first took notice of a very fine stream of water, used for the purpose of working the numerous water-wheels and necessary machinery used in mining—this stream proceeds from the top of the hill in which the mine is situated, and, therefore, has a good fall upon the wheels. We then proceeded to examine the buildings and outcrops, which are numerous, and the expense of putting the same in full repair will not be great; the smelting-house, which is 60 ft. long, and 24 ft. wide, built of excellent granite, can be made fit for use at a very trifling cost, and, from the inquiries we made, I found it quite capable of smelting all the tin raised in the county of Devon—this alone will be a source of great profit, and highly remunerative to the shareholders, if properly managed, as we find there are many rising mines in the neighbourhood, raising large quantities of tin, which, in order to get smelted, the owners are now obliged to send by land to Plymouth, and from thence it is shipped to France. The smelting-house on Dartmoor will save this heavy expense, on account of these mines being within a mile or two of it. Fuel may be obtained to an unlimited extent from the peat and turf on the Moor, this company being allowed to raise what they require at no charge whatever; coals can be brought by the Dartmoor Railway from Plymouth, within a mile or two of the mine, at a trifling cost for carriage, the railway being solely employed in running granite from Dartmoor to Plymouth—the expense, therefore, of back carriage is very small. We took a round of the bounds of the mine, which in extent are certainly very great, and we should consider it would be many years before the mineral wealth would be exhausted. If the workings of the ancient are any criterion to go by, Dartmoor at one time must have been one of the greatest mineral districts in the two counties, as there is scarcely a valley for miles around that has not been strewn for tin. We have no doubt whatever, from the indications upon the surface of this mine, that the returns must have been enormous, and it appears that no expense was spared in putting everything in the most complete order.

From the main lode, we were assured by several old miners, there have been thousands of pounds' worth of tin raised. We cut out some portions of it, which proved to be very rich fine-grained tin. We have during our visit, and personal inspection of several tin and other mines in Devon and Cornwall, never seen anything to compare with it; and we have no doubt the adventurers will find this a highly remunerative speculation, not only in the smelting department, but also in the mining. After having made a scrupulous examination of the surface, we accompanied by Capt. T. Gregory, Capt. J. Floyd, and several miners working at the time, proceeded underground, commencing at the shallow end of the lode, and from thence it is shipped to France. The smelting-house on Dartmoor will save this heavy expense, on account of these mines being within a mile or two of it. Fuel may be obtained to an unlimited extent from the peat and turf on the Moor, this company being allowed to raise what they require at no charge whatever; coals can be brought by the Dartmoor Railway from Plymouth, within a mile or two of the mine, at a trifling cost for carriage, the railway being solely employed in running granite from Dartmoor to Plymouth—the expense, therefore, of back carriage is very small. We took a round of the bounds of the mine, which in extent are certainly very great, and we should consider it would be many years before the mineral wealth would be exhausted. If the workings of the ancient are any criterion to go by, Dartmoor at one time must have been one of the greatest mineral districts in the two counties, as there is scarcely a valley for miles around that has not been strewn for tin. We have no doubt whatever, from the indications upon the surface of this mine, that the returns must have been enormous, and it appears that no expense was spared in putting everything in the most complete order.

We noticed the different places where the old company had stopped away the backs. There still remains a large quantity of ore, which may be left at once, or sent to the smelter, which was left for the former. We were informed, only 400, per ton—only worked up the best ore, and threw the other side; but, at the present price of tin, this ore will pay well for stamping, and will be prepared as soon as the stamps are erected, and the wheels repaired. The smelting-house is only a few yards from the main lode—so that tin may be quickly prepared for market, and the company will at once get a ready market for the superiority of the tin here produced.

We then inspected the shaft—the whole of which appeared in good repair, the sides firm, and all quite dry. We wound and found the mine was only 10 fms. under the adit level, and this, compared with other mines, is extremely shallow; and when we look to the large returns that have already been made—upwards of £30,000,—what may not be expected from such a mine, when sunk 30 or 20 fms. deeper, and the lode in a more settled strata? It is a question whether this mine will not give copper when the depth is increased, as great numbers of tin mines do. We must next draw your attention to the middle or north lode of the set, and which have never been worked upon, except by the old company, and their works are considerable—so that there can be little doubt but they must have found them profitable. These lodes can be cross-cut at the deep adit without much expense; and it is the opinion of those who have worked in the mine many years, that they will prove very rich in tin. The present deep adit will thoroughly drain them of water, and they may be worked at a very small expense, as the ground is soft and easily worked; the cost of driving would be from 20 to 25, to 30, per ft. The tiniferous part of some parts of this mine, I was informed by the party who had smelted it, produced 150 tons of black tin out of 80 tons of ore—being at the rate of 75 per cent. The lodes are now laid open; therefore, as soon as the water is forked, the mine will be immediately placed in a paying position. Upon the whole, we were highly gratified with our visit; and we have little doubt but the shareholders will find this to prove a highly remunerative investment, and fully realise their expectations of a good dividend-paying mine. Capt. Gregory, the agent of the company, was extremely civil and obliging in giving us and Capt. Floyd every information in his power—nothing was held back. I think, under his spirited management, with the superintendence of Capt. Spargo, the works will progress with speed, and in a workman-like manner. We have also to tender our thanks to the secretary for his courteous conduct in permitting us to inspect the mine—indeed, he seems to wish parties interested in the shares to see the mine and judge for themselves, feeling confident that, by their so doing, they will feel quite satisfied the concern will pay well. We should strongly advise those shareholders who have time to spare, to visit the mine, and see for themselves; and we have not the slightest hesitation in stating, they will be highly gratified with the prospect presents to view. A trip to Newton, by rail, brings the mine within about 25 miles; and from Newton, the scenery is truly romantic—the road on each side being skirted with lofty hills; the sides covered with orchards, plantations, &c., presenting a scene of grandeur from the beginning to the end of the journey. The tors on Dartmoor are bold and grand in appearance—pile after pile of granite is heaped up until they are lost amidst the clouds. The rivers abound with Dartmoor trout—the fishermen being at liberty to use his rod without any restraint; and last, though not the least, the inhabitants around are famous for their hospitality which has been so often ascribed to the county of Devon. Upon the completion of the South Devon Railway, the distance from the nearest station to the mine will not exceed seven miles.

(Signed) E. O. EVANS, on behalf of the deputation.

EXMOOR WHEAL ELIZA.—A special meeting of adventurers was held at the mine, on Tuesday, the 1st inst., RICHARD SLIMAN, Esq., in the chair. The auditors reported that they had examined the accounts, and found them correct; that great credit was due to the pursuer; that no arrears of calls existed from the commencement of the mine, in August, 1845, to this date; that the balance against the adventurers is 70,174 1d., due to the bank; that the assets (exclusive of buildings) in machinery, according to Capt. Edward's valuation, 352, 5s.—The accounts having been examined and passed, the following report from Capt. Joseph Pryor was read:—I beg to say we began to sink the engine-shaft on the 17th May, since which time we have sunk 1 ft. 0 in. 11 in. through a large and kindly lode, composed of gossan, yellow and green copper ore, muddie and quartz, and white iron; due shaft is at the present time 4 fms. 5 ft. 6 in. below the adit, and the underlay of the lode is south, having a large lode also to the north; the south lode will soon be out of the shaft in the east end, as we proceed sinking; the underlay of the lode is about 18 in. in the fm.; if we put our shaft down to a 12 ft. level from the bottom of the adit, we shall have to drive a cross-cut about 12 ft. south from the shaft to cut the south lode; the time I calculate to sink the shaft and drive the cross-cut is about four months, with six miners and two tackle men; in the meantime we are sinking the shaft. I should feel much inclined to costean to the east, for that part of the lode we meet with in the lobby to the engine-wheel.—It was resolved, that the captain's report be acted on, and a call of 1s. per share made.

In another column we have given the particulars of a very important discovery just made in the Currency Creek special survey, in South Australia, where copper ore of a very valuable description has been discovered. One very important feature in the position of this survey is, that it is only seven miles from the coast, whilst the Burra Burra Mines, which are so very valuable, are situated 96 miles from the port of Adelaide. This feature will, of course, give to those interested in the Currency Creek survey a decided advantage, from the diminished cost of transit—the ore being, at the same time, quite as valuable as that discovered on Burra Burra estate.

OLD DELAWARE SLATE COMPANY.—This company held their half-yearly meeting on the 10th May, at the company's office, in Plymouth, when it appeared that the funds of the company warranted a dividend of 5s. per cent. for the last half year, being at the rate of 10s. per cent. per annum, with a prospect of a very great increase. John Shepherd, and E. Mellish, Esqrs., retiring directors, were re-elected.

WORKINGTON COLLIERY.—We are glad to learn that Mr. Penrice has succeeded in finding the main seam at Jackson's Pit, at a depth of about 23 fms. from the surface; this seam, which is 10 ft. 6 in. in thickness, is said to be of most excellent quality. The undeviating success which has, at all times, succeeded every speculation made by this gentleman, is such, as cannot fail in raising him to an eminent position amongst his brethren of the same profession, as well as of men of science generally; and it is not to much to say, being generally, if not universally admitted, that the present and prospective advantages of the ports of Workington and Harrington, are fairly attributable to the skill and untiring industry of Mr. Penrice, under whose able management the coal trade in that locality, which had dwindled down into comparative insignificance, is now placed on a permanent basis, which, while it must be very remunerative to the lord of the manor, and a source of satisfaction to Mr. Penrice, is of incalculable benefit to the shipping, trading, and operative part of the Workington community.—*Whitehaven Herald.*

TREASURER MINE.—This mine is situated at Mullion, about four miles north-east of the Lizard Point, and was formerly worked to a considerable extent but at only a shallow level. The workings have been lately resumed; and, having had the means afforded us of inspecting the plans and sections, and the reports received from the agents appointed to examine the mine, as also the resident captain, we avail ourselves of the opportunity of stating its present position, and directing attention to the very splendid slabs of virgin copper at the office of the company, one of which is 5 ft. by 3 ft. 9 in., and weighs 371 lbs., giving a produce of 90 to 95 per cent. We do not find at the time of the former workings that they carried below 20 fms. from surface, where an adit or cross-cut has been driven 320 fms. in length, which has been cleared up, but no lode discovered, it being assumed to be to the east, from the nature of the discoveries lately made. There is also a shallow adit, or level, 8 fms., which carries off the water from the present workings, such being the extent to which the latter have been carried in depth. The lode, which runs north and south, has an underlay east, about 85°, and is from 3 to 3½ ft. thick, carrying with it slabs of metallic copper on the foot and hanging walls, with branches or strings of horsefish ore, malachite, or carbonate, grey and yellow ore, and the several varieties, being, perhaps, the choicest collection in the metropolis of copper ore, both as regards richness and the size of the stones or specimens—one, as we have already observed, weighing 371 lbs.; and another, which was taken from the lode, being 476 lbs. of virgin or malleable copper. The present workings are distinct from those of the old men, and a shaft has been run down, 8 fms. in depth, on the course of the lode, which is represented to be regular, and 20 fms. have been driven to prove it—the water preventing further sinking until a communication is made with the lower workings, so as to carry off the water down to the 20 fms. cross-cut, or adit. In the meantime it is proposed to sink a shaft, so as to take the lode in depth, which, however, can only be considered as a trial shaft, inasmuch that it is not intended to put down an engine-shaft until the lode is seen further in depth, and the point ascertained of its proper position. The extent of the set is 800 fms. on the course of the lodes, and 600 fms. east and west, and is held at 1-15th dues. There is a peculiarity respecting the lode in which the discovery has been made—that of its being nearly north and south; and the rich deposit, at the point of intersection, is remarkable, on which we may have occasion to offer some further remarks. The mine may be said to be in private hands, the number of adventurers being limited; the Cost-book System is, we understand, strictly adhered to, and the accounts rendered monthly, while meetings of the committee are held weekly, when the reports from the agents at the mine are submitted.

A company is, we understand, in course of formation, for working the extensive collieries of Tonmawr, situated near Neath, and immediately adjacent to the ports of Britton Ferry and Swansea. The collieries are in active working, and the outlay expended on bringing them into their present state, with construction of railway, erection of houses, wharfs, &c., is set down at nearly 100,000, 70,000, of which was outlaid on the railway alone, which is 7½ miles in length. The surface belonging to the mineral property consists of 483 acres of arable, pasture, and mountain land, and 150 acres plantation. The collieries are in good working condition, and yield from 140 to 150 tons of coal per diem, which quantity, it is stated, may be largely increased. The coal is of a bituminous nature, and is represented as being a strong durable steam-engine coal—there being a regular and steady demand, which promises to be greatly increased by the establishment of several large foundries, and the completion of the South Wales and Vale of Neath Railways. It is proposed to raise a capital of 120,000, in 6000 shares, of 20s. each, on which instalments, to the amount of 10s. 10s. per share, are to be called, extending over a period of five years—45,000, being paid by five equal instalments, as the purchase-money of the property, while it is contemplated that a floating capital of 5000, will be ample for the purposes of prosecuting the collieries, the estimate of profits ranging from 4500, to 9000, per annum; and it is assumed that the result of the first year's operations will yield a dividend of 15 to 20 per cent. on the amount paid as deposit or first call of 2s. 10s. per share. We believe two-thirds of the shares have been already taken up, and that the concern may be considered as a private adventure: we are glad, however, at all times, to draw attention to any novel project.

BRITISH MINING OFFICES,

41, MOORGATE-STREET, LONDON.

The Tin, Copper, and Silver-Lead Mines in Cornwall, Devon, and Wales, have lately drawn more than the usual attention of capitalists to their immense wealth, and the large returns made by an efficient application of capital; while the increased knowledge of geology, the vast improvements in the steam-engine, and the economy in working, together with the low price of materials, make them a source of greater and more certain profit than at any former period—thereby constituting them a legitimate, safe, and profitable investment.

These offices have been established at the suggestion of several gentlemen connected with the mining interest, and who have long been impressed with the conviction, that a desideratum, such as the present, is essential in promoting the objects of those who may embark in mining pursuits, and when it is considered that there are large tracts of rich mineral ground unexplored, where money, judiciously laid out, would produce very handsome profits, there can be no doubt but that such offices will be found highly beneficial to the mining interests—whether considered with reference to the lords or adventurers.

Mr. J. B. Clymo, of Cornwall, who is acknowledged to be a scientific and practical miner, will be in attendance at the offices (unless when required for the purposes of surveying, &c.), and will give the fullest information as to the respective mines, as well as upon mining generally, on application personally, or by letter. It is further intended, for the satisfaction and security of those who may consider their interests to this office, that all Mineral Property shall be thoroughly examined and reported upon by respectable and competent mining agents, previously to the investment of capital.

A "finance committee" will be appointed from the body of shareholders in each mine, in whose names the funds will be paid into the banker's hands, to defray the expense of working; and as the "Cost-book Principle," under which the best regulated mines in Cornwall have been advantageously managed, will be strictly adhered to, the shareholders will be enabled to see at once, and when it is considered that there are large tracts of rich mineral ground unexplored, where money, judiciously laid out, would produce very handsome profits, there can be no doubt but that such offices will be found highly beneficial to the mining interests—whether considered with reference to the lords or adventurers.

The necessary arrangements for conducting the correspondence, and affording such information as may be sought by parties residing either in London or the country, have been completed, and are such as, it is presumed, cannot fail to secure the support and patronage of all those whose object is the acquisition of accurate data connected with mining operations.

Highly respectable agents have been appointed in the principal towns in the kingdom for the allotment of original shares in the different mines, the affairs of which are conducted at these offices.

All further particulars may be obtained on application at the Offices, 41, Moorgate-street, London.

THOMAS HENRY TAUNTON, Secretary.

PANTDRAINIOG QUARRY SLATE COMPANY, Bangor.

Registered provisionally, pursuant to the 7 and 8 Vic., cap. 110. Capital £40,000, in 2000 shares, of £20 each.—Deposit £2 10s. per share.

DIRECTORS.
JOSEPH LAWRENCE BUTLER, Esq., 1, Dale-street, Liverpool.
JOHN FOWLER, Esq., 8, Rodney-place, Clifton, near Bristol.
ISAAC JOHN HORLOCK, Esq., Rocks, Marshfield, Gloucestershire.
HENRY BIRCHFIELD SWABEY, Esq., Great Cumberland-st., Hyde-park.
(With power to increase their number to seven).

BANKERS.
Messrs. Charles Hopkinson and Co., 3, Regent-street.
Messrs. Paget, Bainbridge, and Co., 12, St. Paul's Churchyard.

SECRETARIES.
Messrs. Richardson, Smith, and Sadler, 28, Golden-square, London.
Secretary—Mr. John Henry Murchison.

OFFICE—19, ESSEX-STREET, STRAND, LONDON.

This company is formed for the purpose of working the Pantdrainiog Slate Quarry, in the parish of Llanfyllid, Carnarvonshire, the proposed purchase of which can be effected on terms most advantageous to the company.

The slate from the Pantdrainiog Quarry is of the pure Bangor vein, and of the finest quality and colour. The quarry is situated about five miles from Bangor, and is a portion of an estate covering an area of about 39½ acres. The great Holyhead road passes through this property, and connects the quarry with the wharf at Porth Point on the Menai Straits, and also with the Chester and Holyhead Railway, which crosses the turnpike road, at a point about three miles distant, the proximity to which will enable the company to convey slates into the Liverpool, Manchester, and Midland markets, with a punctuality and despatch that cannot now be attained through the medium of shipping.

The quarry, upon which a large sum has been already expended, has been opened for 20 years; and there is at present about 80,000 tons of marketable slate to be obtained from the metal now uncovered.

The property is held for a term of years, which will expire in 1903, without any royalty, and upon exceedingly favourable terms.

Taking the value of 1 ton of slate at a price much below that which is obtained, and estimating the cost of getting, making, and cartage, and all the expenses of management, there will remain a net profit upon the capital of £40,000, equal to 20 per cent. per annum.

Parties desirous of taking the cancelled shares, may apply personally till the 15th day of June next, to any of the following gentlemen—in London, to the secretary, at the office, No. 19, Essex-street, Strand; to Messrs. Richardson, Smith, and Sadler, 28, Golden-square; or to Mr. James Lane, mining agent, 75, Old Broad-street, City; in Liverpool, to Messrs. D. and J. B. Nelson, or to Messrs. Sudlow, Brothers; in Manchester to Messrs. Cardwell and Sons, or to Mr. Augustus Hahn; in Birmingham, to Mr. W. H. Collins; in Bristol, to Mr. Henry Dayrell, Glass-street; and in Exeter, to Mr. R. Trip, 12 and 13, High-st.

Prospectuses, with the engineer's report, and engraved plans of the quarry, may be had on application at any of these addresses; and at the office of the Mining Journal, 36, Fleet-street, London.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.	
Bank Stock, 7 per Cent., 10s	Belgian Bonds, 4½ per Cent., 93½
3 per Cent. Reduced Ann., 87½ 7½	Dutch, 2½ per Cent., 84½
3 per Cent. Consols Ann., 88½	Brazilian, 5 per Cent., 83½ 2½
3 per Cent. Annuit., —	Chilian, 6 per Cent., —
3½ per Cent. Ann., 88½ 9	Mexican, 5 per Cent., 80½
India Annuit., 9 s	Spanish, 6 per Cent., 72½ 3
India Stock, 10½ per Cent., 246 4	Ditto 3 per Cent., 84 3½
3 per Cent. Consols for Acc., 88½	Portuguese, 5 per Cent., 80½
Exchequer Bills, 1000l. 5d., 3 4 pm.	Russian, 5 per Cent., 110

MINES.—There does not appear to have been much, if any, improvement in the mining share market since our last; the transactions have been of a very limited character; nor do we find buyers disposed to advance to the prices named, or quoted. The reports received from the country are generally of a very encouraging nature, which surprises us the more that so little is doing. Shares in the following mines have changed hands since last week:—West Wheal Maria, East Crowndale, Fortescue, Devon and Courtenay, North Roscar, Condurrow, Franco, Tryphena, Wheal Mary Ann, Trehan, Herodscote, Gomena, Wheal Trellawney, Saint Michael Penkivel, Exmoor Wheal Eliza, Alfred Consols, Coulthie Hills, and North Fowey.

We learn that the report presented by the secretary of the Coombe Valley Slate Quarry, at their late meeting, is of the most satisfactory character, which has produced a demand for the shares at an advanced premium.

The Pantdrainiog Slate Company, which is at present before the public, have limited the period for payment of the deposit to the 15th, immediately after which the shares (if any) not paid upon will be taken by the directors and their friends—thereby affording the public an opportunity of a copartnership in an investment of a highly promising character. We are pleased to hear this, as we believe this company holds out prospects far surpassing many that have lately been introduced into this market; with this view we are borne out by the City article of the *Morning Post* of the 31st May, as well as many country contemporaries.

Among the many new and promising speculations lately introduced to the notice of the mining community, perhaps few hold out greater promise than that of Coulthie Hills Lead Mine, in Cumberland; the shares in which were taken up in a few days, and several have since changed hands at a premium.

We have been advised of an improvement in Devon and Courtenay; shares have, in consequence, changed hands, but not above our former quotation. In Dartmoor Consols, we learn that several transactions have taken place—most likely resulting from the gratifying report furnished the shareholders by the deputation, appointed at a late meeting—a copy of which appears in another column.

A meeting of adventurers in Great Rough Tor was held on Saturday last, when it was resolved, that the adjoining set should be worked separately, as East Wheal Rough Tor, which was divided into 2048 shares—several of which have been sold since at a considerable premium.

The business done in the foreign mining shares, appears to have been confined entirely to Australians, in which a few transactions have taken place.

RAILWAYS.—Most descriptions of railway shares showed a further improvement at the commencement of the week, and a good deal of business was transacted. The settlement of the account on Monday was completed without difficulty, and money commanded from 5 to 7 per cent. A very slight decline took place on Tuesday, which gradually increased, and extensive sales took place, both by London dealers and by orders from the country. Yesterday, however, a sudden improvement took place, and prices in general advanced.

MEETINGS.—**MADRAS RAILWAY:** Special meeting, to determine whether they should proceed with the undertaking, or wind up the affairs. Numerous communications had been made to the India House in the two last years, which were treated with contempt. It was decided to wind up; and 2000, and the furniture were presented to Mr. Heath, the secretary, who had given up his salary.—The proceedings of the other meetings are given in another column.

AT MESSRS. LAMOND'S SALES, ON TUESDAY, the share market was rather dull, but prices were steady. On Friday, business was somewhat flat, and the prices obtained did not quite reach the quotations of last sale.

SCOTCH BANKS.—The Messrs. Allen, of Edinburgh, say, in their monthly circular for May:—Our banking establishments, during the late fortnight, have made a harvest of it, and are still charging such rates as cannot fail materially to increase their balances-sheets this summer. The Union has already raised its dividend from 7½ to 8 per cent., and others will probably follow its example.

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2730 miles of railway, was 176,650, such accounted for—97,510, for the conveyance of passengers only; 43,326, for the carriage of goods, and a remainder of 35,814, for passenger and goods together, not respectively ascertained; being an increase over the corresponding week of last year of 35,776, when the mileage was about 2,592.

Name of Railway.	Length, l. m.	Present actual cost.	Last Div.	Traffic Returns, 1847.	1846.
Arbroath and Forfar	15	£142,900	3 p.c.	£270 10 6	£254
Chester and Birkenhead	15	638,292	24	839 3 8	607
Dublin and Drogheda	35	685,248	31	593 12 2	730
Manchester and Bury	35	345,738	31	1391 17 9	1544
Dundee and Arbroath	16½	186,323	6	101 17 8	284
East Lancashire	28	814,417	—	—	—
Eastern Counties	184½	6,513,026	7	19040 10 0	9411
Eastern Union	17	227,253	—	616 0 0	—
Edinburgh and Glasgow	46	2,112,136	6	3654 12 0	3416
Glasgow, Paisley, and Ayr	53	1,567,281	7	2708 18 8	2303
Glasgow, Paisley, & Greenock	22	835,518	2	1263 19 11	1094
Great Southern and Western	26½	1,343,718	—	1387 10 4	—
Great Western	241	9,714,939	8	31384 12 2	29027
Ipwich and Bury	26½	303,768	—	512 0 0	—
London and North Western	378½	18,042,004	10	47248 18 9	40683
London and Blackwall	4	1,102,717	14	1578 14 2	1339
London, Brighton, & South Coast	112	5,109,667	7	10240 14 9	5205
London and South-Western	127	4,278,789	9	9652 4 104	9850
Manchester & Leeds	117½	6,056,291	31	10814 12 10	6500
Manchester, Sheffield, & Lincoln	69½	1,676,108	—	3185 11 8	1941
Midland Company	329½	7,862,274	7	23290 11 11	16763
Newcastle and Berwick	9	1,184,079	5	948 7 11	—
Newcastle and Carlisle	65	1,184,080	5	2349 19 2	2261
Norfolk	70½	1,199,689	7	2148 10 0	1475
North British	72½	1,459,938	—	1940 5 7	—
Preston and Wyre	30	432,014	24	—	809
Shrewsbury and Chester	15	334,345	—	479 10 0	—
South Devon	80	1,201,263	5	718 12 3	—
South-Eastern	146½	5,866,411	31	10386 0 8	7880
Taff Vale	30½	888,411	61	1607 9 7	1832
Ulster	25	358,353	64	770 17 10	560
York and Newcastle	163½	1,712,317	9	8413 12 0	6586
York and North Midland	162½	2,483,356	10	6430 3 8	5655

FOREIGN RAILWAYS.

Amiens to Abbeville	29	573,338	4	524 0 0	—
Dutch Rhinish	57½	—	—	5135 0 0	5130
Northern of France	200½	2,000,000	4	11135 0 0	—
Orleans to Tours	72	600,000	4	2900 0 0	—
Paris and Orleans	82	2,011,720	12	8005 0 0	6715
Paris and Rouen	85	2,082,916	8	8064 0 0	—
Rouen and Harle	59½	—	4	2578 0 0	—
Strasbourg and Basle (monthly)	88	—	15	7350 0 0	6800
Paris and Versailles (left bank)	—	—	—	—	—
(right bank)	—	—	—	—	—

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 15 6—Bate's West Hartley 15 9—Burnhope Hartley 14 6—Chester Main 14 6—Davison's West Hartley 16 6—Dean's Primrose 14 6—Dipton Tansfield 1

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—
To the Editors,
Mining Journal Office,
26, Fleet-street, London.
Also, to avoid trouble, Post-Office Orders should always be made payable to WILLIAM SALMON MANFELL, as acting for the proprietors.

"J. J. D." Hanover-place, Regent's-park.—The oscillating engine was patented by Mr. Witty, on the 15th June, 1813. Dr. Jamieson, in his *Dictionary of Mechanical Science*, observes, that "the name of Witty will never be forgotten while the steam-engine is remembered, or we shall retain its use." Witty, like most of his class, found the truthfulness of the adage, that "genius is a gift which enricheth others, but destroys the possessor." He secured, by patent, no less than 10 different inventions—three for steam-engines; two for gas-burners; one for a pump; one for a steam-carriage; one for tubular flues, for consuming smoke; one for a gas furnace; and one for improvements in the construction of bridges and roofs. It is seldom that authors of new inventions derive much benefit from their labours; with Witty, many of his inventions are flourishing, and producing thousands to others—while he, the author of them, and who struggled for years to obtain their introduction, in 1844, when in his 70th year, was in a state of beggary; an appeal was made to the engineering world in 1845, but only a small sum was collected. In 1839 marine oscillating engines were introduced by Naunby, in a vessel named the *Brilliant*—afterwards by Maudslay, Spiller, the late S. Seaward, and, finally, by the Messrs. Penn. An arrangement of oscillating-engines has also been patented by our talented correspondent, B. Hiram, Esq.: in 1844 there were upwards of 6000-horse power at work on this principle.

RAILWAY IMPROVEMENTS.—We have in type a description, with engravings, of Mr. P. C. Claassen's proposed system of Railways and Railway Carriages.

Mr. Darlington on the Working and Ventilating of Coal Mines, in our next; also, Mr. D. Muesel, Jun., on the Government Interference in Mines.

BRIDGES BUILDING.—In our next Journal we shall publish some statistical information (by Mr. Motley) respecting Bridge Building—having reference to the late deplorable accident on the Chester and Shrewsbury Railway.

THE MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all the news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, JUNE 5, 1847.

The publication of a Reply (for we believe more than one reply has been furnished to Lord CLARENDON, though only one published,) to the letter of Sir CHARLES LEMON, Bart., on the copper ore duties, affords us an opportunity of calling the attention of our readers to it, and also of reviewing our own opinions on this subject.

The rise and progress of the trade in foreign copper ore affords a very instructive lesson in commercial affairs, the whole course of it being within the memory, and under the observation, of almost the youngest among us—for 20 years ago it had no existence. The introduction of the article into this country having been vigilantly guarded against by the imposition of a prohibitory duty, from the notion then prevalent, that it was necessary to "protect" our native mines; though how that could be protected from foreign competition, in the sense then supposed, which had itself to seek a market in foreign countries, it is difficult to imagine. And how little it effected its purpose, the great fluctuations in the price of copper, and the frequent complaints that our deep mines must be abandoned, during the existence of those prohibitory duties, are ample evidence. In 1827 a change was effected in the law, which allowed foreign ores to be imported and smelted in bond—the produce to be re-exported in the shape of cake, or unmanufactured, copper—and, for some years, the chief imports consisted of the produce of one mine in Venezuela, which, it was confidently predicted, would ruin the mines of Cornwall, though that mine has been abandoned some years, after ruining those who embarked their capital in it; and the mines of Cornwall are producing more copper, and, we believe, yielding better profit, than they did previous to this alteration in the law. Those provisions of the law of 1827, which restricted the export of the produce of foreign ores to unmanufactured, or cake, copper, were found to produce results injurious to the manufacturers and consumers of copper here; and it was deemed expedient to do away with the system of smelting in bond, and to levy a duty in its stead—partly as a source of revenue, and partly as a "protection" to our own mines; which change, like that of 1827, was loudly cried out against by the mining interest of this country as fatal to their prosperity.

Soon after this change of the law, parties interested in the export of manufactured goods from this to Chili, and the importation of copper ores from that country, together with some of the smelters of this country, whose works were more immediately dependant on such supplies of ore, began to express fears of the injurious effects of the duty, although no such effects were then evident; but, on the contrary, the quantity of ore imported had gone on increasing, say to the year 1844; and this increase was mainly relied upon by the advocates of the duty, as evidence that its imposition had not, and would not, interfere with the trade. But the parties above alluded to, insisted that they had undoubted evidence that it would interfere with it, by encouraging smelting abroad; and diverting large portions of the general supply of copper into other channels, to the detriment of important interests; and that if Government waited until this happened, before they would be convinced, it would then be too late to retrace our steps. If we look back from this point, we shall be struck with the beneficial results of the relaxation of the prohibitory system in 1827. We had then no trade in foreign copper ores; while, in 16 years afterwards, it had not only been called into existence, and was a growing branch of commerce, but it had actually reached to the value of nearly a million sterling, and employed considerable numbers of our own mining population at higher wages than they could earn at home—enabled the producing countries to take more of our manufactures in exchange—afforded back freight for our shipping, and additional employment for our colliers and smelters—concentrated in a greater degree the copper trade of the world in this country, and enabled us advantageously to supply the growing wants of other countries with this important metal. Having taken this retrospective glance at the trade, we will not here follow either Sir CHARLES LEMON, or his opponents, through the war of words with which they assail each other; but will content ourselves with a simple statement of the circumstances, which are now patent to the world. Chili has proved herself to be a most important copper producing country, and it is now beyond doubt that she has the means of converting the ores into fine copper. Smelting, more or less rude, had always been carried on in that country, but had been partially abandoned, to send the ores to England. But now these abandoned works have been restored, and, at least, two new ones established on the English principle. Thus far in Chili—then in the United States two smelting works are in operation; a considerable one is in course of erection near Hamburg; the French are smelting the rich ores of Peru; and in Sweden works are in progress—all of which were unheard of before the imposition of the duty. From a dispassionate review of these facts, we think the only rational conclusion to be drawn is, that the duty is interfering with this trade, and threatens to raise up rivals in branches of business, which it is especially desirable to concentrate as much as possible in this country.

Our readers are aware that we have frequently maintained opinions at variance with these we now express; and we are free to confess, that our zeal for the mining interest of this country, and our earnest desire especially to promote the welfare of the working miner, and to protect him from undue competition, has, in some degree, prevented our looking at this question in all its bearings; but, having advocated the withdrawal of the so-called protection to the British farmer and other classes, by a repeal of the duties on corn and other articles, and being constantly engaged in urging on the French, and other Governments, the repeal of their duties on the

importation of iron, though those duties are (because they are not exporters of the article), a real protection to their own mines; and believing, as we do, that the principles of free-trade tend to the general welfare, we cannot longer hesitate to avow, that we believe the time is come when the copper ore duties may be repealed, without any injury to our own mines, and with certain benefit to other important interests.

We cannot, however, close these remarks without directing attention to the lengthened extracts which we have given in another column, from the letter in reply to Sir CHARLES, by the Liverpool Committee of the advocates for abolition, in which is so ably exposed the shifts to which the supporters of protection (?) are driven, for arguments to uphold an insupportable and falling cause. The exposition is carried through every paragraph, every sentence of Sir CHARLES LEMON's epistle; and clearly exhibits the fact, that while he accuses the committee, in their Memorials to the House of Commons, not only of bringing forward insufficient arguments, but of intentional exaggeration; that his letter consists of unsupported arguments, unfounded assertions, and garbled extracts, from beginning to end. In support of this latter assertion, we need only call attention to the letter from Messrs. GEMMELL, a part of which Sir CHARLES only quotes—a few lines inserted by the writers as an introduction to their opinion on the ultimate effects of the duties on the British copper trade—a few lines, ending with a semicolon, as introductory to the word "but," &c.—to which we draw the particular attention of our readers. Such is the way in which the advocates for a duty on foreign copper ores attempt to convince those who are not in the habit of thinking and reading for themselves—that the repeal of a duty, which brings into the Treasury the enormous revenue of 50,000*l.* per annum, would bring destruction on our Cornish brethren, put a stop to the working of the mines, annihilate commerce and manufactures, and make us dependent on foreigners for our supplies. Again, with regard to timber, tallow, and sugar, being raw materials for manufacture, Sir CHARLES has been equally unhappy. The letter under notice shows, what every man of the least pretensions to commercial knowledge is aware of, that these articles are imported for consumption; and which, indeed, Sir CHARLES himself admits of the two former, when he says, "they are extensively used in the Cornish mines." We will not follow further the erroneous statements, for which the Member for West Cornwall has made himself responsible; but just observe, that the letter of the committee not only shows the fallacy of the grounds on which the advocates of the duty support their views, but adduces evidence from official returns—from long experience with those countries from whence our foreign supplies of ores are derived—from a knowledge of the changes which have taken, and are taking, place, and a pretty clear conception of future results—to convince every unbiassed mind, that the case is one demanding prompt consideration, and that none of the counter statements have tended to invalidate it, or to impugn the correctness of the grounds upon which the claim for the remission of the duties is founded; but that every year's delay tends more firmly to establish the opposition which has so early taken root in other countries, and which will soon, if unchecked, deprive England of a large and important trade.

The state of the mining population of Cornwall is becoming truly alarming; the impossibility of hundreds of families obtaining for months past sufficient food through the high price of provisions, is not only ruining the physical energies of the men, but driving them to measures which has well nigh threatened the peace of the county; and, as is always the case in such emergencies, idle, half-drunken fellows, prowling about ready to take advantage of every opportunity for plunder, are endeavouring to excite the more peaceable of the population to acts of violence. We are glad, however, to record, that the majority are peaceably inclined, and only require that provisions should be supplied to them at a lower rate. At a meeting of the Mayor and Justices for the eastern and western divisions of Penwith, held at Penzance, on Monday last, a deputation was admitted from a large assemblage of people, principally miners, congregated at Chyanndour. They stated their propositions, which were—1. That flour and corn should be supplied them at such a price as to enable them to obtain a sufficiency for their families from their mine earnings, which at present they were unable to do.—2. That some men, from weakness for want of food, are unable to get up the ladders from their work without assistance; that their object is to act peaceably, and to solicit the regard and true sympathy of the public.—3. That it is their conviction, that circumstances admit bread and flour to be had lower; and 4. That wages might, perhaps, be increased a little; but, under all circumstances, it would be better that provisions should be cheaper. These propositions having been considered, it was resolved, that the price of barley to all miners, until the 1st of September, who do not earn more than 55*s.* per month, shall not exceed 16*s.* per Cornish bushel (three Winchester bushels); and that no family have less than half a bushel per week. A circular was then drawn up to send to lords and adventurers who had not attended the meeting, and a subscription entered into to defray a portion of the loss which would be sustained. The town of Penzance was thronged with miners and their families, the shops were all closed, and serious disturbances were expected; eventually, however, all passed off quiet. We are glad to record this ready acquiescence with the wants of the population; but trust that, long before the 1st of September, the resolution will become a dead letter, and the men be able to obtain provisions at a price commensurate with their earnings. Foreign provisions are now pouring in from all quarters—there is every prospect of a superb harvest at home—already has the barometer of commercial prices begun to indicate a steady fall—and there is every reason for hope that, ere many weeks elapse, provisions will be at a price to carry to every cottage plenty and content.

It is with much pleasure we observe, that at length attention is being directed to the absolute nature and contents of the produce of our mineral districts; and that not content with mere simple assays for any one metal, which may be supposed to exist in any description of ore, it is probable our mining adventurers will, in future, to a considerable extent, submit samples of the produce of their sets to full chemical analysis, from which there is little doubt but many discoveries of substances of a valuable nature would be made, hitherto thrown away as worthless. We are led to these remarks, from the facts recorded in our last week's Journal, with regard to Herland Mine and Wheal Tremayne—in the latter of which, 158*l.* 6*s.* per ton was actually obtained, for what the agents expected to get only about 13*l.* for, and which had been the previously usual price. In another column, will be found a letter on the subject from our respected correspondent, Mr. JOHN MITCHELL, to which we direct attention, as expressing most clearly and convincingly the necessity for careful chemical investigation, in every case where minerals are found presenting new or uncertain features.

COMMUNICATION BETWEEN GUARD AND ENGINE DRIVER.—The self-evident importance of the guard of a train being able to communicate a signal to the engine driver, in the event of any accident happening to a carriage, or for any other cause, has led a correspondent to propose the following simple plan, which we think may be found practically useful.—Let two perpendicular guide pieces be fixed to the funnel of the engine, in which shall slide, facing the driver, a metal plate painted white, and the word "stop" printed on it in black letters; to this plate should be attached a small chain, passing over a pulley fixed near the top of the funnel, and carried within reach of the guards. In case the engine is required to be stopped, the plate should be drawn towards the top of the funnel, and kept there till noticed by the driver, which he could scarcely fail to do.

THE ACCIDENT ON THE CHESTER AND SHREWSBURY RAILWAY.—The falling of the bridge over the Dee, on this line, and the consequent loss of life, has caused a sensation with regard to the responsibility of engineers, Government inspectors, &c., never before observed; and well it may have done so, it being an accident of no common kind, it not having arisen from the common causes of concussion, broken rails, &c.; but, as appears most likely, from all we can yet learn, it arose from some inherent defect in the bridge itself—either with regard to the construction, or the iron girders by which it was supported. In last week's Journal, we gave full particulars of the accident, and the dimensions of the several parts of the erection; our observations on this occasion will, therefore, be confined to the evidence on the inquest, and on such accidents generally. With respect to accidents of this nature, there has been several, but, happily, without loss of human life; and the greater majority have taken place before the opening of the lines of which they formed a part. There can be no doubt, that in proportion to the vast increase of traffic which has taken place in the last 10 years, accidents have amazingly diminished, whether from better regulations on the part of railway management, or from a growing acquaintance of the public with railway dangers, we are not prepared to say; but, certain it is, that ten to one of the fatal accidents which have occurred, have been owing to the recklessness, or thoughtlessness, of the parties themselves. But here there is no such plea—here is a viaduct on a line of 61 miles, but just declared safe by the Government inspector, when on a train passing without any indication of danger, without the least symptoms of weakness, or fault of structure, the carriages are precipitated into the gulph below, and five human beings launched into eternity. On the inquest, evidence was given, that the girders had been known to suffer a deflection of from 3 to 5 in., which was denied by Major-General Pasley (the late inspector, who had declared the viaduct perfectly safe), giving as his opinion, that a cast-iron girder would have snapped long before a deflection could have reached 4 in. The most important part of the proceedings, however, was a report of Mr. Stephenson, the engineer-in-chief on the line, who stated, that on his way to Bangor, a few hours before the accident, he narrowly examined every part of the structure, and saw nothing to indicate weakness—neither could he perceive any imperfections in the manner in which the work had been fitted. He confidently concluded, that every part was firm and sufficient; and the fact alone, of the traffic having been carried on since October last, fully justified this opinion. Throughout his report, Mr. Stephenson evidently endeavours to make it appear, that the engine and tender, and probably a portion of the carriages, were off the rails some time—that the tender was heaved up, and struck the girder a violent side blow, which broke it, dislodging the masonry, and thus causing the fall of the other girders, and the entire structure; but we would ask Mr. Stephenson, can a viaduct, having to sustain such enormous weights and pressure, be considered properly constructed, which could not withstand a scraping side blow and pressure from an engine tender; for it could be no more, without falling to pieces, and letting the carriages through the trap thus open to receive them? We think every impartial engineer will answer—no! The fact is, that through the anxiety of railway proprietors, and continually worrying to get a line open, and engineers and contractors to pocket their fees and payments, one-half the works of masonry of this description on modern lines are inefficiently constructed, and brought into use too soon—while of all others, on a railway they are the most important; and now that railway construction is extending itself to an unknown limit, we think it behoves the Government to provide some proper inspecting authorities, to secure the public from these catastrophes; for it is evident, nothing can be depended upon from your soldier-engineer inspectors, who can know but little of railway construction, and who make a gala day of one of inspection, just before the opening of a line. Since writing the above, the inquest was continued, but not concluded. Sir E. Walker said he would not travel on the line, and he wished Mr. Stephenson might make himself right with the public. Mr. Stephenson said, he hoped he should again obtain the public confidence. Messrs. Locke and Vignoles supported the views of Mr. R. Stephenson, but Mr. Walker and Capt. Simmons would not give an opinion until, from a further inspection of the works, they could ascertain if there was any trace of the engine and tender going off the line.

ACCIDENT ON THE BRIGHTON AND POITSMOUTH RAILWAY.—The train which leaves Brighton at 10 minutes past four reached Bosham, about three miles beyond Chichester, at the appointed time (40 minutes past five). It had proceeded about a mile and a half, and was going at the rate of from 30 to 35 miles an hour, when the engine suddenly leaped off the line, and ran, at an angle of about 45°, across the up line, and over the embankment, which at that spot is about 4 feet high. The body of the engine-driver was found lying between the rails under the foremost carriage, and the stoker was lying within a yard or two of the engine-driver, with one of his arms off, the whole of the tender having passed over and severed it from his body. It is a very singular fact, that none of the passengers were in the slightest degree hurt; and, indeed, one of them asserted, that he was not aware any thing had happened until the train stopped, and that it did not stop violently.—On the coroner's inquest, which was held on Wednesday last, there was, as usual, an attempt to evade answering questions, and the engineers had taken the engine entirely to pieces, so that it was impossible to trace any cause for the accident. Mr. Kirtley, the locomotive engineer to the company, on being asked for a reason for the accident, said, "He did not like to answer the question; the Government Inspector would be down, and he would wait." The coroner, however, pressed him for an answer; and he said his own impression was, that the engine left the line from the oscillation to which that particular class of engines were subject—one of Stephenson's patents, with three axles under the boiler, and the cylinders placed outside, which always caused oscillation, and there is an overhanging weight at each end, which causes a kind of undulating motion. After being several times pressed for "Yes," or "No," to the question, "Is it a safe engine?"—he said, "I think there are some objections to be raised, but I wish it to be understood, that I do not consider it an unsafe engine; Stephenson was consulting engineer, and he thought he had some interest." This is the way in which evidence is wrung out of railway officials; and every possible step is resorted to, to keep the true causes of these lamentable occurrences from the knowledge of the public.

NEW IRON-WORKS IN SOUTH WALES.—(From a Correspondent).—The "Briton-Ferry Iron Company" rolled their first bar of iron on Whit-Monday, amidst the acclamations of a multitude assembled to witness the commencement of "rolling," by these new and important works. The day was kept as a holiday in the neighbourhood—the vessels in the harbour were gaily decorated with flags, and throughout the day the rocks and mountains reverberated the roar of guns and the shouts of the people; all was excitement and congratulation, and joyous anticipation. This company of spirited capitalists have judiciously selected, as the site of their works, a piece of ground, which is the terminus both of the Neath Canal, and of a branch of the South Wales Railway; the river Neath flows on one side, and the proposed docks bound it on the other. This position thus commands unequalled facilities for the transmission of the raw materials from the adjacent native beds, and for the transport of the manufactured article to the market. Under the skilful management of an experienced gentleman, a powerful engine, numerous furnaces, large rolling-mills, and all the apparatus for the manufacture of iron bolts, rails, plates, &c., as well as comfortable cottages for the workmen, have been erected. The works commenced most auspiciously, and for the sake both of the proprietors, and of the labouring class, we sincerely hope they will proceed successfully—of which we have no doubt, if we may credit the augury of the many "iron men," who very critically examined and tested the quality of the bar, and who declared it to be superior to any hitherto made in Wales, and even tougher and stronger than Staffordshire iron. Is this the beginning of a new era in iron age? Is Wales about to take the precedence of England, and the prestige of the north to pass to the west? It is said the Briton-Ferry Company aspire to the honour of solving this problem, by making their "B. F." the favourite brand in the market.

OAKEN AND CHURCHWAY COLLIERY, FOREST OF DEAN.—In the Bankruptcy Court, on Monday last, Mr. Matthewman, of Coleford, Gloucestershire, coal mine proprietor, was brought up to be discharged from custody, as an insolvent.—His HONOUR, on looking at the schedule, said this was a very unusual case. The debts were stated at 10,700*l.*, and property unencumbered 30,700*l.*—Mr. DUNCAN said, the principal property was a coal mine, called the Oaken and Churchway Colliery, in the Forest of Dean.—His HONOUR asked whether there was any opposition?—A SOLICITOR replied, that there could be no objection to the insolvent's being discharged out of custody, but the question was, what could be done with the property?—Mr. DUNCAN said, that the insolvent proposed to pay his debts in two years, if the mine was worked under his direction, or it could be leased for 2000*l.* a year at the least.—His HONOUR said, that in this case it was very requisite that a trade assignee should be appointed; and, in order to give all the creditors an opportunity of considering the matter, an intermediate meeting ought to be held, and notice should be given to the mode in which the mine ought to be worked. If the insolvent was allowed to work it in his own way, it would, beyond doubt, realise at least what had been stated.—His HONOUR said, that, perhaps, it would be well to hear the insolvent's views on the subject before any proceedings were adopted, as the case was one quite out of the common course; and, if there were grounds of opposition, it would not be prudent to have the petition dismissed.—The case was then adjourned to the 12th of June.

MINING IN WESTERN AUSTRALIA.—Accounts received by the Overland Mail represent the copper and lead mines, discovered near Perth, as promising an abundant return on the capital likely to be invested in their excavation, without adding any thing to the notices about these ores and the coal to the northward, received by previous arrivals.

IMPROVEMENT IN THE MANUFACTURE OF RAILWAY RAILS.

THORNEYCROFT'S PATENT ANTI-LAMINATING RAIL.

Among the difficulties which railway engineers have had to contend with, there has, perhaps, been none which has caused them greater anxiety than the lamination of the iron, of which the rails are formed, from their being piled and faggotted together, causing them to splinter off on the face, on the passing of heavy trains, rendering them dangerous and useless in a short period after being laid down, and entailing continual and heavy expenses. It has long been a subject of deep thought and serious consideration, how this lamination and splintering could be remedied; for, as the traffic and the weight of the locomotive engine increases, the evil becomes still more serious, and alarming accidents have taken place from this cause.

Mr. THORNEYCROFT, of Wolverhampton, the eminent ironmaster, among many others, having been consulted on the subject, applied himself earnestly to its consideration and accomplishment, and we are happy to say, has succeeded beyond his most sanguine expectations. Samples of the rails have been inspected by many of the most eminent railway and other engineers in the kingdom, all of whom have expressed their decided opinion of the complete success of the new manufacture. One of them, a man of great eminence in his profession, having been to the works and inspected the improved mode of manufacture, pronounced it most simple and perfect, and the greatest improvement that has been made in the make of iron rails since railways have been known; and, to use his own words, "it must prove a great national benefit, and I hope the inventor will be amply rewarded for his trouble and enterprise." In the expression of this sentiment we most heartily concur.

We last week announced, in our List of Patents, this invention, and we have since had an opportunity of closely inspecting parts of four rails, which had been broken to show the fracture of the iron at one end, while the other was polished, and an acid applied, showing all the laminae, and every seam formed by the faggotting of the iron. The following diagrams will clearly show Mr. THORNEYCROFT'S improvements:—

Fig. 1.

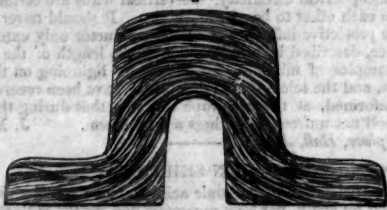


Fig. 2.



Fig. 1 represents a section of a rail manufactured on the old method, showing the lamination of the iron from top to bottom. Fig. 2 shows Mr. THORNEYCROFT'S improvement, by which it will be seen that the part of the iron liable to wear away is one perfect homogeneous body, as much so as if it was cast-iron or cast-steel, still perfectly malleable as any other wrought or rolled iron, but, being jointless, is perfectly free from laminae, and not liable to splinter off on the edges. We understand the rails are about to be laid down immediately at some of the principal stations on the larger lines, where the most severe trials will be given them. The inventor appears to be quite confident that the results will prove highly satisfactory, and indeed in this there seems little difference of opinion among all who have inspected them—a few months, however, will decide, and, in the meantime, specimens may be inspected at our office.

IRON AND COAL TRADES OF FRANCE.

In connection with the question of mineral productions, it will be seen that France, notwithstanding recent discoveries, is still greatly indebted to foreigners (principally the English) for large quantities of materials necessary for her metal manufactures. The following details concern the imports of these articles for the month of April last, compared with the two previous years:—

ARTICLES.	1847.	1846.	1845.
Rough iron	76,057	89,913	54,590
Coal	2,079,800	1,667,062	2,330,127
Rough lead	16,861	13,356	14,221
Zinc	13,563	9,229	9,532
Rough tin	903	1,257	1,692
Copper	10,112	4,977	6,475

Subjoined are the particulars of importations during the first four months of the same years:—

ARTICLES.	1847.	1846.	1845.
Coal	6,296,636	5,578,273	5,030,220
Rough iron	331,073	345,872	173,347
Copper	27,751	13,232	32,066
Tin	2,605	2,960	2,591
Zinc	35,400	28,568	18,588

It will be perceived from this statement, that the importations of coal and iron have considerably increased. The increase in coal during 1846, compared with 1845, amounted to 547,553 metrical quintals; and during 1847, compared with 1846, to 918,363 metrical quintals. The increase in iron amounted to 73,325 metrical quintals—comparing 1846 with 1845; and to 85,200 metrical quintals—comparing 1847 with 1846.

At the end of the month of April there were in stock 74,637 quintals of iron, 917 quintals of tin, 1829 quintals of copper, 78,506 quintals of lead, and 460 quintals of zinc. The duties paid on iron during the four months above stated, are returned at 1,826,934 fr., and on coal at 1,427,006 fr. It is remarked, that, with the exception of coffee, cotton, oil, and wool, there are no other articles which are so productive to the public Treasury.

LEAD AND COPPER TRADES OF AMERICA.

From the peculiarly favourable location of Galena, situated, as it is, in the centre of the mining region, it is becoming, and must eventually be, the first point on the Mississippi, above St. Louis, for commerce, shipping, trade, &c. The value of articles now shipped far exceeds that from any other point on the Mississippi, between St. Louis and the head of navigation.

SHIPMENTS OF LEAD FROM THE UPPER MISSISSIPPI.	1843.	1844.	1845.
Pigs	428,400	473,599	534,601
1843	584,131	1846	672,430

The greatest amount shipped in any one year was in 1845, being 54,495,000 lbs., which, at the average value in New York, would be worth \$2,245,194.

SHIPMENTS OF COPPER FROM THE UPPER MISSISSIPPI.	1843.	1844.	1845.
Lbs.	35,000	85,000	778,300

In 1845 amount not known, but has probably largely increased; the annual export of copper is in value about \$25,000.

There are in all, at this time, 49 furnaces in Jo Davies and Iowa counties—turning out an average of 70 pigs per day each, or an aggregate of 3430 pigs, of 70 lbs.—making 240,100 lbs. of lead per day.—Lead on hand, to be shipped at the opening of the navigation, estimated at 173,500 pigs.—*New York Herald.*

THE LATE MR. JAMES MARSH.—This talented and indefatigable chemist, who was employed for 40 years in the Royal Arsenal, and whose name will ever be remembered, from the discovery he made, and published, of the process for the instantaneous detection of the minutest portion of arsenic, at his death left a widow, who is now, we regret to learn, in a delicate state of health, and great destitution. The Board of Ordnance—and, shameful it is to the Government—have no provision for surviving relatives of those employed in that department at their disposal, unless they are killed while in the actual discharge of their duties; and thus this poor widow, after 40 years of her husband's most scientific and beneficial services, is thrown upon the cold charity of the world. Some few friends are now making an appeal to the public, in hopes of raising a sufficient to extricate her from her present difficulties, and place her beyond future want. We trust they may meet with the success the merits of the deceased deserved.

PROGRESS OF FRENCH MINING INDUSTRY.

(FROM OUR PARIS CORRESPONDENT.)

Some time ago, the Minister of Public Works nominated a commission to examine into the questions raised by the amalgamation of so many of the coal companies of the Loire into one concern. The commission has just terminated its labours by declaring that there is nothing illegal in that amalgamation; but that the guarantees offered by the company (they were the fixing of a maximum of the selling price of coal, and of a minimum of the miners' wages), were not such as to warrant the Government in converting it into a *société anonyme*. The commission recommends that measures shall be brought forward to supply all the deficiencies in the existing law, which prevent the Government from having a complete control over the company.

About two months ago, you will recollect that I informed you that the Municipal Council of St. Etienne had authorized the mayor to take measures for prosecuting the company before the tribunals for having infringed the articles of the penal code, relative to coalitions. The interminable formalities of the French law, required that this decision, to have any effect, should be sanctioned by what is called the Council of Prefecture, which is a body that may be likened at an immense distance to one of our county grand juries. The council, after a good deal of deliberation, has refused to sanction the demand of the Municipal Council. The great company is, therefore, saved from the annoyance of legal prosecution by an important public body. There is, however, you will remember, a case pending before the Lyons Court—the object of which is to procure the dissolution of the company; the complaint, in this case, is made by some discontented shareholders of the company itself.

It was stated, some time back, in the "Paris Correspondence" of the *Mining Journal*, that the Company of the Chanay Coal Mines intended to amalgamate with the Great Loire Company—that design has since been formally carried into effect. The company has declared itself dissolved from the 31st of March last, ordered its affairs to be wound up with all dispatch possible, and nominated a committee to carry into execution the verbal conditions agreed to, for an amalgamation with the Loire Company.

It appears that the profits for 1845, of the Company of the Haut Four-neux du Nord, were 584,201 fr. 25 c.; of which 115,000 fr. were carried to the reserve fund; 5 per cent. interest, and 9 per cent. dividend, were ordered to be divided among the shareholders.

The annual meeting of the Company of the Fonderies et Forges d'Alais is called for the 19th of June.

The Government has several mining engineers in Morocco, employed in examining into the mineral resources of that country. If any valuable coal pits should be discovered lying handy to the Algerian territory, an excuse would, no doubt, soon be found to bring that poor devil, the Emperor of Morocco, into a war, and to wrest from him the district in which the pits might be situated. But, thus far, nothing has occurred to show that Morocco is much richer in coal and ores than its sister Algeria. A few months ago, indeed, there was a great deal of talk about its mineral wealth; but it appears that there was as much real foundation for it, as there is for all the chatter we hear, and all the scribbling we read, about the mineral wealth of Algeria.

The *Journal des Chemins de Fer* announces the formation of a company, under the name "Compagnie des Locomotives Perfectionnées," the object of which is to bring into trial new inventions in locomotives. Its first essay will be on a system comprising three pistons, acting on the same axle, with three independent cylinders. The capital of the company is fixed at 40,000 l., in 2000 shares.

Some time ago, the shareholders of the Chazotte coal fields transferred the concession of the pits of Tremil to the Loire Company. As payment for this, they are now receiving one share of the Loire Company for every two of the Chazotte Company.

A meeting of the Charbonnages Belges Company will be held in Paris on 31st July, to deliberate on the propriety of raising a loan, the necessity of which was demonstrated to the shareholders at the recent annual meeting. A dividend of 12 fr. 50 c. per share, which was fixed at the annual meeting, is now being paid in Paris.

The usual weekly letter from St. Dizier says—"The situation of the furnaces is far from being improved. Affairs are absolutely null; all that is said as to the offers made by the travellers, and as to the pretensions of the holders, is, in our opinion, very apocryphal, and, we may say, imaginary—no bargains are entered into. A decline will take place, but the amount of it is not known; at least, such is the conjecture. What is certain is, that there is now a panic which has not been equalled, and that after a year of scarcity and misery, which has put a stop to all buildings in the provinces. But the growing crops present a favourable appearance, and when the harvest shall be got in, buildings, &c., will be resumed, and activity be given to trade. Some large bargains have been made by speculation in *fontes moulées*. It is probable that they have taken place at 40 fr. or 50 fr. decline; and that when the furnaces that are embarrassed shall have placed all they have, affairs in that description will resume their ordinary course." The amount of decline here mentioned—40 fr. or 50 fr.—seems excessive, and I am almost inclined to think that there must be a mistake.

The *Journal des Chemins de Fer* says, that the silver mines of Kongsberg, in Norway, yielded, in the first quarter of the present year, 10,700 marks of pure silver, which were sold by public auction to the Bank of Denmark for about 22,128 l. This quantity was greater by $\frac{1}{4}$ than the yield of the corresponding quarter of last year.—*Paris, Wednesday.*

BELGIUM.—In the month of April last Belgium imported 1510 tons of coal, all of which came from France. Her importations of coal for the past four months of the present year have amounted to 3714 tons; in the same period of 1846 they were 3789 tons, and of 1845 3552 tons. I have more than once referred to the ever-increasing exportations of different descriptions of arms that are made by this country. The returns of exportations show that the progress is continual. In April of this year they amounted in value to 384,604 francs; whilst in April of last year they were only 280,950 fr.; and in April of 1845, 306,350 fr. Of the 384,604 fr., the Zollverein took to the amount of 91,730 fr.; France, 72,080 fr.; the United States, 24,590 fr.; Brazil, 41,261 fr.; Turkey, 10,470 fr.; the Netherlands, 8701 fr., and other countries. I think these facts are well worthy the attention of your readers, especially those of Birmingham and Sheffield—for they show that, in the manufacture of arms Belgium, is becoming a rival that should not be disclaimed. It must not be supposed that the large exportations of April last arose from accidental causes, for the returns show that the total exportations in the first 4 months of 1847, were 1,278,111 fr.; of the same period in 1846, only 965,259 fr.; and in 1845, only 817,702 fr. They show, too, that the quantities exported in April to the different countries named were rather under the usual monthly average. In April last other exportations were as follows:—Coal, 168,667 tons—almost all of which was sent to France and the Netherlands, especially the former; cast-iron in *guises* and *épaves*, 6338 tons to the Zollverein and France; rails, 1161 tons to the Zollverein; worked cast-iron, 129,638 kils. to the Zollverein and Netherlands; works in *fers battus*, 84,345 kils. to the Netherlands and the Zollverein; nails, 635,799 kils. to the Netherlands, the Hanse Towns, Austria, Turkey, Brazil, and other places; machine works in iron, 123,909 kils. to Russia, the Zollverein, the Netherlands, France, and other places (for these articles Spain and Austria are also good customers to Belgium, though they did not happen to purchase in April); detached pieces of machines, 120,583 kils. to the Zollverein, the Netherlands, and other places; raw zinc, 739,279 kils., the greater part to France; zinc *laminé*, 224,424 kils., the greater part to England (France, the United States, the Netherlands, and the Hanse Towns, also take large quantities).

These details will give your readers an idea of the directions in which the foreign branches of the metallurgic industry of Belgium are developing themselves, and would, I should think, enable them to take measures to counteract Belgian activity, or, at the very least, prevent it from supplanting English products. The returns of the exportations made during the first four months of 1847, 1846, and 1845, are as follows:—Arms—1847, 1,278,111 fr.; 1846, 965,259 fr.; 1845, 817,702 fr.: coal—1847, 496,251 tons; 1846, 365,031 tons; 1845, 351,982 tons: cast-iron, in *guises* and *épaves*—1847, 32,723 tons; 1846, 21,306 tons; 1845, 11,481 tons: rails—1847, 2133 tons; 1846, 2089 tons; 1845, 594 tons: cast-iron, *ouvrés*—1847, 180,138 kils.; 1846, 69,124 kils.; 1845, 76,049 kils.: works in *fers battus*—1847, 335,071 kils.; 1846, 183,453 kils.; 1845, 479,605 kils.: nails—1847, 3,335,589 kils.; 1846, 1,703,006 kils.; 1845, 227,872 kils.: machines, complete works in iron—1847, 474,333 kils.; 1846, 503,345 kils.; 1845, 394,715 kils.: machines, detached pieces in iron and cast-iron—1847, 258,243 kils.; 1846, 87,289 kils.; 1845, none: zinc, raw—1847, 1,886,033 kils.; 1846, 1,096,156 kils.; 1845, 1,538,134 kils.: zinc, *laminé*—1847, 633,947 kils.; 1846, 463,208 kils.; 1845, 891,165 kils.

The Company of the Charbonnages de France, nominally set up last year, at Seraing, will pay 45 fr. per share for 1846, on and after the 15th July next. This sum is a "dividend," and is in addition to the 50 fr. per share interest paid in January.

The Grande Montagne directors notify that they require the third call of 250 fr. per share, to be paid before the 1st of July next.

The Minister of Public Works has just caused to be published a statistical account relative to mines and metallurgy from 1839 to 1844. I shall have occasion to make quotations from it. In a brief report to the King, which precedes the work, the Minister states that, from 1840 to 1844, not fewer than 775 accidents occurred in mines, occasioning a loss of life to 546 persons, and injuring 580 others. The steam-engines employed in the kingdom have greatly increased in power and number; at the end of 1844, there were 1604, of 46,200-horse power.—*Brussels, Tuesday.*

SILVER AND GOLD MINES OF THE NEW WORLD.—No. XIII.

XI. OF THE TOTAL PRODUCTION OF AMERICA.

In resuming the results, at which we have arrived, for the different countries of America separately, we find that the present production is 614,641 kilogrammes of silver, of the value of 136,476,000 fr.; and of 14,934 kilogrammes of gold, of the value of 51,434,000 fr. For the two metals together, the value is 187,910,000 fr. The following table indicates for each country the present annual production:—

	SILVER.—Weight.	Value.	GOLD.—Weight.	Value.
United States	890,960	87,793,000	1,800	6,199,000
Mexico	4,887	1,086,000	2,957	10,184,000
New Granada	1,518,158	251,460,000	4,954	17,062,000
Peru	624,044	11,584,000	708	2,439,000
Bolivia	33,592	7,457,000	444	1,525,000
Brazil	20,000	4,440,000	2,500	8,610,000
Various			1,071	3,689,000
			506	1,722,000

614,641 kil. 136,476,000 fr. 14,934 kil. 51,434,000 fr.

At the commencement of the century, the production was 796,000 kilogrammes of silver, and 14,100 kilogrammes of gold. Thus the production of silver has declined by about one-fourth, and that of gold has slightly increased. The total production of America, since the discovery, may be calculated at 36,600,000,000 fr., of which 26,700,000,000 fr. were in silver, and 9,900,000,000 in gold. In weight it is 120,169,979 kilogrammes of silver, and 2,874,711 kilogrammes of gold.

The following table recapitulates the total production of the different countries of America since the discovery:—

	SILVER.—Weight.	Value.	GOLD.—Weight.	Value.
United States	60,782,917	13,507,000,000	18,525	64,000,000
Mexico	250,000	55,000,000	379,221	1,306,000,000
New Granada	58,163,062	12,925,000,000	556,840	1,918,000,000
Peru			337,725	1,163,000,000
Bolivia			1,334,400	4,596,000,000
Brazil			248,000	854,000,000
Chili				

Total... 120,169,979 kil. 26,703,000,000 fr. 2,874,711 kil. 9,901,000,000

The total value of gold and silver for each country is—United States, 64,000,000 fr.; Mexico, 14,813,000,000 fr.; New Granada, 1,973,000,000 fr.; Peru and Bolivia, 14,088,000,000 fr.; Brazil, 4,596,000,000 fr.; Chili, 1,070,000,000 fr.—Grand total, 36,604,000,000 fr.

The production of the two metals is in weight 1 kilogramme of gold for 42 of silver, and in value 1 fr. in gold against 2 fr. 70 cents in silver. I do not give the above figures as absolutely correct—they are only approximate; but they are sufficiently correct to be made the base of reasoning. A value of 36,000,000,000 to 37,000,000,000 fr. is great, is extraordinary. Yet let those riches, drawn from the mines of America during 300 years, be compared to what it is permitted to calculate for the working of the coal mines of Great Britain, from which a people eminently industrious draw the motive power and the fire, by the aid of which it incessantly transforms the first matters, both of its own soil, and of those that are brought to it from all parts of the world. All these treasures of America will then appear very modest indeed; for it requires only a few years, four or five perhaps, for English industry to create a value equal to all that America has yielded in gold and silver by the toil of three centuries.

This comparison shows the value to a great country of vast coal basins, and demonstrates how much they are preferable to the most renowned mines of precious metals. And such is the case, because coal mines are mines for labour—for great and unlimited labour; and labour is the first of riches, it is riches themselves. In another point of view, and in another form, we may see to what a small mass is reduced this production of precious metals, which has occupied and occupies so much human labour, which has excited so many ambitions, which has glutted so many passions, caused to be committed so many cruelties, and led to so many enterprises. All the silver drawn from the mines of the New World would form a volume of 11,477 cubic metres; the gold would represent one only of 149.

In other words, all the silver that has been drawn from those numerous veins—veins that may be justly called giants—would make a sphere, of which the radius would have only 14 metres, and which placed by the side of the column in the Place Vendôme, would not attain more than two-thirds of its height. As to gold, it is a quantity singularly small. One is almost confounded to find that all this gold of the New World, about the abundance of which so many fables have been made, and of which, for example, it was said, that the sole ransom of the Inca Atahualpa had filled a temple* would not fill one-half of a drawing-room, five metres high, by ten metres long, and eight metres wide, of a Parisian shopkeeper. Those quantities, intrinsically so small, have, however, sufficed to produce in commerce a revolution, of which the political and social consequences have been immense.

* That of Caxamarca, the ruins of which still exist.

IMPROVED METHOD OF TEMPERING TOOLS.—Mr. Alfred V. Newton, of the Patent Office, Chancery-lane, has taken out a patent (being a communication) for an apparatus for hardening and tempering edge tools. For heating axes or other similar articles a heating furnace is constructed in the form of a vertical cylinder, the exterior muffle of sheet-iron lined with fire-brick 4 ft. 8 in. in diameter, or of such outside diameter, as to give it an inside one of 4 ft. and 3 ft. high. In the interior of this cylinder several fire-chambers are formed, usually four; the inner wall of each fire-chamber is 18 in. long, 4 in. from front to back, and about 4 in. in depth, forming, in the whole, a circle of 3 ft. 4 in. diameter; under each there are grate-bars, and air is supplied through a pipe, connected with a blowing apparatus. A circular table of cast-iron, 3 ft. 4 in. diameter, is made to revolve slowly on a level with the upper part of the said chambers; this table is sustained on a central shaft, which passes down through the furnace, and has its bearing in a step below it; a pulley keyed on to it serves to communicate rotary motion to the table. When the axes or other articles are to be heated, they are placed upon the table with their bits or steels parts projecting so far over its edge, as to bring them directly over the centre of the fire, and the table is kept slowly revolving during the whole time of heating; when duly heated they are ready for the process of hardening. The hardening bath consists of a circular vat of salt and water; within the tub or vat, a little above the surface of the liquid, is a wheel mounted horizontally, with a number of hooks around the periphery, upon which the axes or other articles are suspended; the height of the hooks from the surface of the liquid is such as to allow the steels part only to be immersed; as soon as the hardening is effected, the articles are removed from the hooks, and cooled by dipping in cold water. With the best cast-steel a temperature of 510° Fahr. has been found to produce a good result in hardening in about 45 minutes.

CONDIE'S IMPROVED MACHINES FOR MAKING MALLEABLE IRON.—We have, in a former Number, noticed a steam-hammer, the invention of Mr. Condie, of Glasgow, respecting which, having so often alluded to Nasmyth's, it is unnecessary to go into detail; it is sufficient to observe, that while Nasmyth's has the hammer face attached to the piston-rod, Condie's consists of a fixed piston-rod and a movable steam-cylinder, to which the hammer face is affixed. We cannot describe the gearing for regulating the action of the hammer without a diagram. The second part of the invention consists in casting forge arvis, and hammer and squeezer faces, with wrought-iron tubes therein—so that water may be caused to circulate through them, and keep them cool while at work; the connection with the supply pipe being made by means of a leather tubing similar to those employed in water turbines, now used in hot-blast-furnaces.

Original Correspondence.

IMPORTANCE OF MINERAL ANALYSIS.

SIR,—I am glad to see that, at last, the importance of a strict examination of the mineral matters raised in this country is beginning to be felt and publicly expressed, by those most interested in the matter. This is evident from the remarks in your "Mining Notabilia," of last week, on Herland Mine and Wheal Tremayne, and only bears out that which I have repeatedly urged to all connected with mining or metallurgical operations—viz.: that every ore, or other substance, raised or employed, the exact nature of which is not understood, should be submitted, not merely to an assay, but to a strict analytical examination, in order that the whole of its constituents may be known; and then it will be perfectly evident, to every one connected with the concern, whether the substance so examined may be rejected as useless, or be turned to some very profitable account. The same rule holds good with our manufacturers' waste products, as many of them contain substances which would not only pay for their treatment, but would yield a handsome profit to the parties, who would have so far broken through the rules of established usage, as to have submitted them to the examination of the chemist.

The province of the assayer is, to a certain extent, exceedingly limited, he merely having to assay a stone for lead, copper, silver, or any other metal, as he may be instructed—so that it is quite evident that, if an ore be sent to him to assay for copper, he assays it for that metal only, and there the knowledge of its contents is ended, as far as the assay is concerned; yet that stone may be rich in gold, silver, cobalt, or some other metals, and the assay may yield so little copper, as to render it useless as a merchantable article—the consequence is, that more is not raised, or if it be raised, in order to arrive at some other substance, it is thrown away as refuse; and hence some concerns, which would, if properly worked, be exceedingly profitable, swallow up immense capitals, and ruin all connected with them, merely on account of the want of knowledge of the nature of the substances raised. Iron and other pyrites are, in many cases, successfully worked for the precious metals; yet, in this country, that mineral is seldom, or ever, employed, excepting in the manufacture of arsenious and sulphuric acids, and that only within these last few years; but very many of the samples I have seen contain both gold and silver. Again, antimonial, cobalt, and chrome ores are met with in this country; yet how seldom is the existence of either of their metals suspected, still less proved? I have known many instances in which the above has been the case; and yet those parties, who are the most interested in the matter, are generally the last to attach any importance to such an examination, as that which I have so often recommended. I hope, however, that other parties will read the remarks I alluded to at the commencement of this communication, and which caused me to trouble you with the above, with the same pleasure, and the same conviction of their truth.—J. MITCHELL: *Hawley-road, May 31.*

HYPOTHESES ON IRON.

SIR,—That the difference in white iron and grey is in the carbon of the latter, crystallising out in graphite, consists with facts, and may be received as an explanation, better than a mere notion of quantity, of the great differences in a furnace working on grey or white iron. The idea, that a furnace of grey iron is in that state which prepares graphite, explains at once the remarkable transition of appearances which ensue on a passage to white metal. In reference to such a solution, I asked the constitution of the carburets, which are combined in pig-iron. If white iron be the point of maximum saturation, or alloy, with a certain carburet, it may be supposed that the continued presentation of carbon disturbs the combination, by altering the constitution of the carburet; and the passage through mottled to grey ensues. The explanation of the cause of grey iron cooling white in small masses, consists also with facts; for grey iron takes several minutes longer to solidify than an equal mass of fluid white, and the causes are convertible—for if the combination, mechanically, of graphite produces a slow cooling, so slow cooling rendered impossible, the graphite has not time to crystallise, and the iron is white. The point over which doubt yet hangs is, if *similia similibus*, the maximum point of saturation with carbon is to be discovered in white iron? I should like to know the exact construction, or components, of the crucible Mr. Mitchell details to have used. I have not Karsten; but Dr. Ure states the grey iron to have been formed by fusion in a black-lead crucible. If this means a common Hessian crucible, I can affirm distinctly grey iron will not be the result. White iron, fused or cemented with an adequate quantity of charcoal, undoubtedly becomes grey; but the apparent meaning of Dr. Ure's passage is, that a fusion of white iron, with consequent loss of carbon, converts it to grey. This would be decidedly erroneous, as every succeeding fusion of iron produces increase of those characteristics of approach to malleable iron, which are habitually in the trade explained by the loss of carbon. I make no pretension to be a practical chemist; the position of an ironmaster is incompatible with the pursuit. So complete an education, and constant devotion of time, is required in the present state of science to attain any accuracy in analysis, that the attempt to combine extreme pursuits must be an unwise neglect of division in labour—inconsistent with a commanding place in either calling. I have observed those who attempt to unite them fail in a great measure in both. I have some acquaintance with ores and carbon in the dry way; and should desire greatly to see it established as a positive law, that heating carbon with carbon produces graphite. I have never seen it occur, and it ought constantly to present itself in a steel cementing-furnace. What I have seen is carbon under heat assuming a deeper black, and more removed from the lustrous aspect of graphite. I should like Mr. Mitchell to add some more examples to the solitary one he has adduced. I think the instances of irregular combination of carbon as to quantity, tend only to throw additional doubt on the belief, that white iron is the maximum compound. Mr. Mitchell admits, in the cases I noticed, that the white iron produced must contain less carbon than the grey iron made use of. But this is the admission of no singular exception, but of the whole practice, on which the manufacture of bar-iron is conducted. By one, or both, of the processes I named, or by a combination of them, pig-iron has, for more than a hundred years, been deprived of carbon and malleabilised. It will follow from this that some white irons, containing more carbon than some grey irons, is the exception, and not the rule. The surest test is to analyse, first, a sample of grey iron; then metal from the same cast only half refined; a third, perfectly refined; and lastly, high-blown metal. These four specimens will exhibit the progressive changes conclusively as to proportions of carbon. I shall take an opportunity of forwarding Mr. Mitchell such specimens; and if other ironmasters do the same, he will have materials for an incontestable conclusion. I have, in habit, attributed the difference between refiners' metal and white iron of the furnace chiefly to the intense temperature, which produces the former, and causes more complete and sudden crystallisation in cooling; but if those who have several furnaces, working from the same stock upon different qualities of iron, forwarded specimens of each, still more completeness would attend the result. All the grades of finers' metal must be absolutely prepared without admixture from the same cast of grey iron. Mr. Mitchell's samples I shall take the first opportunity to see; the practised eye can gain more information on quality in five minutes than by pages of argument. I wish to recur to a statement of Mr. Mitchell some time back, that the metalline alloys he has detected, do not exist in the ores; this I do not clearly understand. All ironstones used in this country (primary ores are more simple) contain at least the three principal earths. How, then, does Mr. Mitchell ascertain that the alloy does not exist in the original constitution? It seems most probable, these highly-oxidisable metals should be derived from the *ingesta* of the furnace most intimately in contact with the iron; the next source of their alloy will be to consider them metallised in the ashes of the carbon, and absorbed with it—while the last, and most difficult, derivation, is to suppose they are attracted from the remoter masses of limestone or flux. There can be no doubt, that we ought to investigate real, not artificial, pig-iron.—FERRERS: *May 26.*

FAN BLAST IN SMELTING.

SIR,—I beg to refer your correspondent, Mr. Walkinshaw, to the interesting paper read before the meeting of engineers at Birmingham on this subject, and printed in your last Number, which he has, perhaps, overlooked. I think there must be the results he alludes to. I would here (if I may be excused the request) wish that your correspondents, who think any remarks of mine worth referring to, might indicate them by my Christian initial, or name. I cannot desire the sanction of my name (trifling if it be) appended to views I do not approve; so, on the other hand, statements of mine occasionally are given to the wrong author through this inadvertence, as, for example, last week by Mr. Deakin.

Gloucester, June 1. DAVID MUSHET, JUN.

ON THE SUPERIORITY OF ANTHRACITE IRON.

SIR,—The public have learnt with dismay the fatal accident on the Shrewsbury and Chester Railway, from the breaking of a cast-iron girder, as described in last week's Journal; and from this, and other previous accidents to iron castings employed in buildings, the use of iron for these purposes will fall into disrepute, unless the cause is ascertained and guarded against. A great many trials have been made at various times on the strength of different varieties of iron, and they have resulted in establishing the great superiority in strength and elasticity of anthracite iron; yet these results have only been taken advantage of by a few engineers in their specifications. It is well known, that the founders in Lancashire and Cheshire use almost exclusively Scotch pig-iron, although their trade runs very much in strong castings for beams, girders, &c., employed in buildings, yet very little Welsh iron, or anthracite, is sold in these districts; nor from the cheapness of Scotch iron will the former ever be used extensively, unless specified for. I understand, the Great Northern Railway Company have decided that their chairs shall be cast from Scotch pig-iron, mixed with anthracite—thus obtaining a casting combining the fluidity of the one, with the strength and fibre of the other. I have heard that the engineers of some other railways are adopting the same mixture for the castings to be employed in their bridges, &c.; and when we consider that the experiments made by Mushet on bars cast from anthracite pig-iron go to establish more than 50 per cent. of strength, and as much of deflection, beyond Fairbairn's results on Scotch iron, one wonders that the results of scientific experiments are so tardily adopted. The great foundries in Cornwall have, for many years, employed a large mixture of anthracite iron for their heavy engine-work, having proved it to be the strongest and soundest in the world. The large cylinder for the largest engine in existence, constructed for draining the Haarlem Lake, was cast principally of anthracite pig-iron. Hitherto, cheapness has carried the day; yet it is now evident that, unless castings can be made of a strength more to be depended on, the founders will, by a short-sighted economy, in not employing the superior metal, lose the best branch of their trade. ANTHRACITE IRON. *May 31.*

STEAM-BOILERS.

SIR,—My attention has been drawn to a letter signed "C." in your last Journal. Allow me, in reply, to state that there were several members of the Institution of Civil Engineers present at our last meeting, myself among the number, by whom Mr. Bodmer's varied talent and untiring energy are fully appreciated. I am perfectly cognisant of Mr. Bodmer's paper, read 24th June, 1845, wherein he names the pumping of hot air into the boiler a means of economising fuel; but he does not claim any originality in this—and so far as the mere conception of the plan goes, he would have considerable difficulty in establishing such a claim. If, however, Mr. Bodmer has discovered and put into operation any plan by which the numerous practical difficulties attending "the pumping of hot air from the flue into the boiler" can be successfully combated, and the saving of fuel really effected, no doubt your correspondent can inform me of the same, and at the next meeting I am sure all justice will be done to Mr. Bodmer's claims; but unless such plan be forthcoming, then I think you will agree with me, that Mr. Bodmer has abandoned the idea as practically useless, and that we are not called upon to discourage Mr. Wilkinson. In conclusion, allow me to assure you, that the sole object of the institution is to forward mechanical science without prejudice; and I shall at all times be ready to afford any explanation in my power to any of your correspondents who will publish their names, but I cannot again notice an anonymous communication. ARCHIBALD STATE, Secretary. *Institution of Mechanical Engineers, Birmingham, May 29.*

ECONOMY OF THE STEAM-ENGINE.

SIR,—I am thankful Mr. F. Wilkinson began, and that "C." took up the matter in your last Number, feeling a lively interest on the subject of injecting heated air into the boilers of steam-engines; and, although believing that in high-pressure engines there would result a considerable economy in its use, I am still at a loss to conceive by what means Mr. Bodmer can profitably employ this principle to condensing engines. I recollect speaking to an engine maker in this neighbourhood, in the year 1810, respecting its application to high-pressure engines—thinking it a new idea, and wishing him to try it for our mutual benefit—when he informed me I was too late, that a Mr. Grazebrook had got the start of me, and had tried the scheme in Shropshire, having actually employed it even to the working of a condensing engine; but, being found liable to choke the same, it was discontinued, and, there being at that time very few non-condensing engines, it became, as I suppose, all but lost. As it appears, by "C.'s" letter, that Mr. Bodmer is in possession of a method of condensing, or otherwise getting rid of, the air, so as not to vitiate the vacuum, I should be most happy to understand it; and am no less curious to know how much coal, per horse power, is saved by the process, after allowing for the power required to work the air-forcing pump? Absolutely certain that any communication, having for its object either the adding to the efficiency, or promoting the economy, of the steam-engine, must be hailed with universal pleasure, Mr. Bodmer's explicit answer, in your next Journal, would oblige and delight many of your readers, besides—J. WALKINSHAW: *Coleford, June 1.*

STEAM APPLIED TO A BLAST-FURNACE.

SIR,—Having constructed the water-regulator, and arranged the position of the blast-pipes, I beg leave to correct the following errors in Mr. R. Mushet's reply to "An Old File," in your Journal of the 22d inst.:—Mr. M. says—"The cold-blast from the blowing cylinder passed into a water-regulator at one side, and passed out into the stove at the other side." If this had been the case, there would have been some colour to his assertion, of water getting into the furnace; but the arrangement of the blast-pipe was designed to prevent the chance of even the vapour of the water getting there. The blast goes direct from the engine to the stove along a straight and nearly horizontal pipe, laid some few inches above the top of the air-receiver, and this pipe is furnished with a branch leading downwards, and screwed to the receiver—the pipe and branch resembling the letter T—so that the blast going to the stoves cannot enter the regulator, which becomes quite filled on the first starting of the engine, and so continues until it stops—acting there merely as a spring, to keep up uniformity of pressure. Again, he says—"There was too much water in the regulator." This could not be the case for any great length of time, there being a pipe so placed as to carry off any excess which might chance to occur. He further says—"At the turn of each stroke the water rose, and some of it passed into the education blast-pipe, and was carried by the blast, &c." Looking at the fact of the blast-pipe going direct from the engine, what does Mr. M. mean by "the water passing into the education blast-pipe"? If the water could possibly have got there, how came it, that there still continued to be "too much," seeing that the regulator was never supplied but at intervals, when found to require it? And yet he says, that "Some water was thus carried by the blast 30 times every minute for months!" Having shown the true position of the blast-pipe to be above the regulator, I next proceed to inform you, that the surface of the water usually stood 4 ft. below the said pipe while the engine was at rest—that the density of the blast was equal to a column of mercury 6 in. high—consequently, the surface of the water in the interior of the regulator would be so much more depressed. I would now beg leave to ask, by what miracle the confined air could, at the same instant, both depress and elevate the water, in order that "some of it might pass, &c." Or, is it more in accordance with nature, to suppose that "some of the water, becoming tired of its confinement within the narrow limits of the receiver, had thrown off its allegiance to gravitation, and thus stripped of ponderosity, had joyously leapt up so many feet and inches for the mere pleasure of possessing liberty." In conclusion, I would recommend Mr. M. to look at things before he describes them; and, by thus disabusing his own mind, I should, hope he will cease to abuse those he appears to consider guilty of what in my view, seems an impossible offence. J. WALKINSHAW. *Coleford, May 27.*

EAST OF SCOTLAND MALLEABLE IRON COMPANY.

SIR,—In the last Number of your Journal there is a letter on the subject of this company by "A Shareholder," who seems ashamed to give his name, though he evidently wishes it to be believed, that his status in the company entitles him to speak with authority. I do not deny that he is illiterate enough, and reckless enough, to be either the chairman, or the chairman's proxy; but he must lay aside his *incognito*, and become responsible for his statements, before I can stoop to notice him any further than simply to declare that, in so far as regards myself, his letter is, from beginning to end, a tissue of stupid, deliberate, and unvarnished falsehoods.—HENRY BEVERIDGE: *Inzevar, by Dunfermline, June 1.*

THE WASTE LANDS OF IRELAND.

SIR,—It is melancholy to reflect, in these days of dearth and destitution, that according to the estimate of Sir Robert Kane, no less than 5,500,000 of acres in Ireland, confessedly available for food for man and beast, and capable of cultivation, lie entirely waste: I confess that, despite of Sir R. Peel's antagonism, I hail, with much satisfaction and delight, the intention of Government to drain hence, and cultivate, these waste lands; nor can there be a more legitimate application of the national resources. Certain it is, if Government do not adopt these measures, the question is a hopeless one, as far as the Irish proprietors are concerned. The question has other aspects than the one which has immediate reference to the sustenance of the sons of the soil. Drainage and cultivation will materially enhance the health, and improve the condition, of the Irish people. Who knows not that swamps, bogs, and wastes, are destructive to health in intermittents and other ills, consequent on malaria? The listlessness and lassitude, which are its concomitants, will account for the idleness and laziness, so common a feature under such circumstances; nay, more, the moral complexion even receives its tinge from these morbid physical evils. Many years ago, in studying the phenomena of malaria, or marsh poisons, I was struck very forcibly with a remark made by Dr. Montfalcon in his work—namely: that he had found these infectious districts to be the cradles of every crime, and the localities where banditti were nurtured, and whence they emanated. My own inquiries and observations in the Pontine marshes, and the Mareme of Tuscany, seem to corroborate his conclusions; and IRELAND, so far from forming an exception, I fear, may be justly cited in additional proof.—J. MURRAY: *Portland-place, Hull, June 1.*

THE ELECTRIC TELEGRAPH.

SIR,—Although the principle of the paragele which I recommended has been partially adopted on the London and Southampton Railway, for the protection of the wires of the electro-magnetic telegraph against the action of atmospherical electricity, the vertical wires are certainly far too distant from each other to be of any service. It should never be forgotten, that the protective influence of a good conductor only extends over a circumference, described by a radius, double the length of the conductor. Various examples of mischief, occasioned by lightning on the wires of transmission, and the telegraphic mechanism, have been recorded; and I have been informed, at the telegraph stations, that during the thunder-storm, the bell not unfrequently rings a false alarm. J. MURRAY. *Portland-place, Hull, June 1.*

FIRES ON SHIPBOARD.

SIR,—The application of carbonic acid gas, liberated by the action of sulphuric acid on chalk, has been recommended for the extinction of fires on shipboard; its efficiency, however, is very questionable. Expanded by heat, it would fail to extinguish ignition; and, in a fierce combustion, might even be decomposed. If you pour carbonic acid gas over the flame of a candle, it is questionable whether it will be extinguished; but if poured laterally, extinction follows. Inflamed phosphorus decomposes carbonic acid, and burns therein with a lambent phosphorescent flame. Sulphuric acid, poured on common salt, would disengage a gas (hydrochloric gas) fatal to combustion; and from its avidity for moisture, &c., and penetrability, might be employed with great success in the case referred to. J. MURRAY. *Portland-place, Hull, June 1.*

BREAD.

SIR,—Her Majesty, it is said, has desired the exclusive use of bread made from "seconds' flour" in the Royal household. Assuredly, there is sound philosophy in this, as there can be no question as to the very superior nutritious properties of bread made from "seconds' flour." Very much that is wholesome and highly nutritious is abandoned, on the rejection of the bran; and an extract from it added to the dough would materially improve the bread. I must, however, be understood as entirely inimical to what is called "unfermented bread." I have examined this season, in various localities, many samples of flour—Danstic, American, and English. In the finest flour obtained from Danstic wheat, the proportion of gluten was not only minute, but in a state of loose aggregation, and so with that from English and American wheat—while the gluten from the "seconds' flour" of all of them not only greatly exceeded in quantity, but was infinitely more plastic and cohesive. J. MURRAY. *Portland-place, Hull, June 1.*

ACCIDENTS IN COLLIERIES.—DR. CLANNY'S LAMP.

SIR,—In this communication, I beg distinctly to state, that I have no intention to detract from merit where merit is justly due. However, observing in your Journal of April 3d last a letter from Dr. Clanny, naming several collieries in such a manner, as to imply that his lamp was in general use in all of them, I wrote to my agent, to inquire if this was correct, to which I have a reply in the negative. Therefore (without wishing to detract, &c., &c.), I beg to observe, that I consider the mention of these collieries by Dr. Clanny without due authority, an unworthy mode of bolstering up the pretensions of the lamp; as well as the qualifications of the doctor, only to be equalled by the impertinent puff of a quack, and not that of a professional man, as I took Dr. Clanny to be. I now, therefore, call upon him to produce before the public certificates from the agents at those collieries, where he states his lamp to be in use, both as to their value as a means of lighting, the extent to which they are used, and their actual safety compared to other lamps.—AN OWNER OF ONE OF THE COLLIERIES WHERE DR. CLANNY SAYS HIS LAMP IS IN USE: *Durham, May 31.*

[The writer has enclosed his name and address in confirmation of the truth of his statement: we, therefore, presume that Dr. Clanny must have been misinformed as to his lamp being used in one of the collieries named by him.]

DR. CLANNY'S LAMP AND CRITICISMS.

SIR,—What was done by "Junius," by the author of the *Waverley Novels*, of *Vivian Grey*, and *Tancred*, by many authors of able pamphlets, and by almost all writers in the daily press, as well as many in the *Mining Journal*, I am not ashamed to do also, notwithstanding Dr. Clanny's charge against me. Truth requires no adventitious aid—has no personalities—and is exclusively of no place. It is as strong in the mouth of a child as in that of an uneducated nation. It stands by itself invulnerable; and, as no authority can invalidate it, neither can any name elevate or dignify what is not truth. Writing anonymously has its advantages, as it mitigates, if not removes, personal feelings, and subdues personal vanities, to which the other mode largely administers. When Dr. Clanny becomes hypercritical with others, he should have been equally so in his own case. When a practical man employs an excusable *proseopoeia* to the object of his profession in his affection for it, and endearingly speaks of a pit in the beloved gender, in compliance with the usage of miners, he does not show grammatical ignorance, but rather his capacious criticism. As sailors so class a ship—saying, "she is a gallant bark"—so we of the mines say of a pit, "she is a splendid pit"; or higher, as astronomers say of the sun, "he is the glorious centre of the planetary system"; and of the moon, "she is a satellite of the earth."

It is curious that acute critics are frequently themselves very indifferent writers. The composition of the learned doctor is neither very elegant nor very intelligible, and abounds in great irritability, as is said professionally sometimes of the nerves. A critic, also, in quoting another, is generally critically correct. He has, however, made three quotations in his little communication—two from Shakespeare, and one from me—and committed in each as many errors to suit his own purposes. I never said there was any deposition of soot on the Davy lamp, as asserted by Dr. Clanny; but on the glass of the Stephenson lamp. The Davy lamp having no glass, there could be no deposition of soot upon it from combustion. The Davy lamp, and I, are not thus to be depreciated. This learned critic should not murder Shakespeare as Macbeth murders sleep, and, in quoting him, say, "Screw his courage up to the sticking-place"; but "Screw your courage to the sticking-place."—*Macbeth*, act 1, scene vi. Nor should he have been so ignorant of the great British classic as to quote him thus:—"Let the galled jade wince, our withers are unwrung"; but "Let the galled jade wince, our withers are unwrung."—*Hamlet*, act 3, scene ii.

It seems neither just nor right that Dr. Clanny, because he has been led into mis-statements, should attack individuals who never aided him in them; his indignation should be more properly poured out upon his mis-informants, and not upon those who correct his errors, and who, as well as himself, are labouring for "suffering humanity." This susceptibility in a wrong direction, denotes a spring of action in the doctor's mind that I respectfully recommend him to look to in time. He might be mistaken in other men's minds, notwithstanding his profession. To impugn the

motives of others is not the way to raise one's own above suspicion. The doctor's misinformation is not confined to that of Jarrold, as I learn, on further inquiry, but extends to every mine in his list. As far as I have already ascertained, Dr. Clanny's lamp is not employed in Willington, Walker, Gosforth, Heaton, Coddridge, Burnhope, or Southmoor, which seven pits were stated by Dr. Clanny, in the *Mining Journal*, to be employing his lamp. When Dr. Clanny can produce documents before the public, signed by the respective viewers of these pits, affirming his lamp to be employed in them as a safety lamp for working purposes, then will the public be better able to rely upon his informant's information. Truth and indubitable facts are the best supporters of suffering humanity—of an and ymous signature, as of a scientific name. VERITAS.

THE CLANNY SAFETY LAMP.—DR. CLANNY AND DR. MURRAY.

SIR.—I am grieved in having been compelled to send a reply to your correspondent, Dr. J. Murray, though I find that all my friends advise me to the contrary. This communication must terminate my noticing anything Dr. Murray may hereafter write, or say, in respect to myself, or to anything appertaining to me. I will quote his words, and then refute them. "I know that your correspondent has been the author of lamps innumerable." This is gross error the first—for that gentleman, not long since, advertised upon a paper I had published, in which I frankly stated, that, during the course of 30 years, I gave to the public six safety lamps—all of which had been well tried in our coal mines, and in no instance had any accident with any of them. Dr. Murray, in continuation, says, "Safety lamps were all abandoned in succession." This is gross error the second—for it is well known to all readers of the late Numbers of the *Mining Journal*, Dr. Murray included, that I published the names of 29 coal mines, in which my new safety lamps had been, and are, in use; and from none of these collieries have I ever received one word of objection to them—but, on the contrary, I had the satisfaction of receiving, very frequently, kind and encouraging congratulations of several viewers and underwriters concerned in these mines. Dr. Murray has the hardihood to pen the following sentences:—"I only know, that the one tried (viz., my safety lamp) before the Commons Committee proved a failure." This is gross error the third, as the following facts will prove:—It so happened, that about the hour of meeting in the lecture-room of the late Dr. Turner, in the London University, a few friends arrived at my hotel. As soon as I obtained liberty, I posted off to the lecture-room, in which were assembled the committee, Dr. Pereira, and several other men of science. A person, named J. Roberts, volunteered to trim my safety lamp; as he had been formerly a pitman, I readily consented. The chairman now proceeded to put the following query to Mr. S. J. Fitzgerald, the short-hand writer—query 4183:—"Have you taken down a list of the different lamps on which experiments are to be made?"—"Yes, I have."—"No. 1. The Davy lamp—No. 2. Ditto, with different seams—No. 3. Dr. Clanny's new lamp—No. 4. Stephenson's lamp, with glass—No. 5. Mr. Ayre's Newcastle lamp—No. 6. Robson's Bolton lamp—No. 7. Refrigerating lamp—No. 8. Dillon's lamp, with a shield of talc surrounding it—No. 9. Upton and Roberts's lamp. My reply to the hon. chairman at the meeting, explained the *modus operandi* in the safety lamp, to which Dr. J. Murray alludes—(vide query 4236). "The principle of this safety lamp is simply, that the moment the inflammable air is admitted to the shield descends—the piece of wire is fused, and the shield descends, so as to isolate the whole wire cylinder, in respect to the inflammable air." Dr. Pereira tried my safety lamp, and all the others, with what was denominated "a high test"—viz., a stream of inflammable gas was made to play upon each safety lamp in rotation, "composed of three or four parts, by measure, of hydrogen gas (pure), and one part also, by measure, of coal gas." Such a mixture was never discovered in any of our coal mines. Men conversant with science would expect, that such a stream of gas must pass through any safety lamp, with open aperture, parallel with the flame of the oil lamp; and such was the case with all of the lamps, with one exception—viz., Upton and Roberts's lamp, from the flame of which the gas would be drawn into the lamp, and the flame of the oil lamp would be extinguished. The hon. chairman said, "You have got the lamp before you upon the principle of Dr. Clanny." In reply, Dr. Pereira explained how the lamp worked, in words nearly the same as quoted above. Query 4243, by the distinguished chairman—"Will you please to proceed to place Dr. Clanny's lamp burning in such a composition as you presume, from what you have heard, is ordinarily found in mines in an explosive state?" The doctor's reply was—"With the permission of this committee, I will first subject this lamp to the same mixture which I have tried on the other lamps—namely, four measures of hydrogen, and one of coal gas." ("The experiment was tried—the flame instantly passed.") Query 4245:—"What the committee wish to know is, whether the mechanical contrivance of the shield will act." (Dr. Clanny, on examining his lamp, objected to any further experiments being performed on it, on the ground, that the lamp had not been properly prepared for the experiment.) In stating these facts, I wish to add, that J. Roberts (the partner of Upton, in a patent for their safety lamp, which, as far as I can ascertain, was never called into use in our northern coal mines), told me that he had seen the lamp of Dr. Clanny, and that he had seen it employed in a mine, to which I consented, as I had walked quickly to the lecture-room. When I withdrew my safety lamp, as mentioned above, I had most cogent reasons for so doing; for, upon examination, I discovered that J. Roberts had accidentally taken up a piece of very strong wire, laying beside Mr. Ayre's lamp, quite inflexible, in lieu of a piece of very fine and fusible wire, which I had placed in the bottom of the box, containing my safety lamp about to be experimented upon. "Mark, how simple a task that is, put the lamp of Dr. Clanny, goes on in the following words:—"Where the wick is supplied with air from above, as in the lamp of Mueseler, my objections are simply those urged by the South Shields Committee." Now, what is the fact? The above-named committee give me every credit I desire in respect to my new safety lamp, and show that I had a priority over Mueseler, by many months. This is gross error the fourth. I need not trouble you in commenting upon the mistake, which we find in the report upon the evidence taken before the committee, at page 8, in favour of Upton and Roberts's lamp. "He that runs may err," I hear no complaints from the coal mines, in respect to precipitation of acid upon the inner surface of my cone glass cylinder; and had such taken place, I should of a surety have heard of it from one authority at least. As to the Mueseler lamp, I know not whether a precipitation takes place upon the inner surface of his thin glass cylinder or not; but this I know, that it is a chimney lamp, with a strong metal chimney within the wire cylinder, &c. I will tell Dr. Murray, that I never contemplated coercing any man, especially our industrious pitmen; and were such an idea to enter into my mind, the Jarrold pit would be the last upon which I would try such assumed power, as may be learnt from my last communication to the *Mining Journal*. Dr. Murray is at his old boasting about mica—by-the-by, he, in his evidence, before the above-named committee, uses the word "tale" only; and it is worthy of remark, that his method of ventilating coal mines, "by a system of tubes—one system connected with the roof, to carry the heated air from the superior aerial stratum of the mine, and the other to bring down a current of heavy air, to replace that; but, in order to accelerate that ventilation, I should have the upper surface of the tube connected with the roof of the mine, entering into a brazer of ignited coke, or charcoal, &c. &c. *Burnt mineral*," &c. &c. side p. 237 of the said minutes—(query 3197). Further, and equally laughable, is the description of tubes, or pipes, which Dr. Murray recommends (theoretically, of course, for we never hear that he makes any experiments), to ventilate our coal mines—side query 3203. "I should employ what is called Hancock's, or elastic India-rubber tube. I would connect this tube with the floor of the mine, and extend it to the farthest extremity of the working, wherever that may be. It is so very flexible, that it could be easily bent in any direction, and thus follow the course of the work." At query 3208, we have Dr. Murray's words—"The comparative expense I do not know; I believe this of my costs about 1s. 6d. a yard." In answer to the query 3209 by the very enlightened chairman, Joseph Pease, Jun., Esq., M.P., in which it is desired to know of what diameter the tube for ventilation, in Dr. Murray's mind, ought to be, he sensibly remarks—"Of about an inch in diameter." Lastly, query 3210—"Well, now, if 50,000 cubic feet of air are required minutely for the ventilation of the mine, how would your apparatus answer?" "I should conceive tolerably well—the diameter might, I presume, be easily calculated." If inspectors under Government be appointed, Dr. Murray should be the inspector-general.

Sunderland, June 1.

W. REID CLANNY.

VENTILATION OF MINES.

SIR.—Mr. Shepherd has erred, in believing I gave him the capacity of taking Mr. Gibbons's views for his own—he perverted them. Mr. Shepherd now has copied Mr. Gibbons exactly, except his theoretical air chimney is larger than Mr. Gibbons's practical air chimney. He would have noticed, had he read Mr. Gibbons's book, his difficulty in extending these chimneys to their present size; and attention to the contents of the *Mining Journal* would have afforded him information as to their necessary size. That Mr. Shepherd should have set up in a mining district, to deliver a public lecture on ventilation, with perfect ignorance, as he asserts, what Mr. Gibbons had done in the adjoining county, and knowing nothing of the *Mining Journal* for six months past, is not at all to his credit—quite otherwise.—DAVID MURPHY, Jun.: Gloucester, May 31.

VENTILATION OF MINES.—MR. G. SHEPHERD, C.E.

SIR.—Your correspondent, Mr. Shepherd, was quite right, in conjecturing that his last sketch would not be looked upon with much favour, for a more absurd scheme of positively injurious supererogation could not well have been conceived. By this new plan, it will be seen that the aid of the main upcast shaft, with its valuable capabilities, for the purposes of ventilation, is, for all serviceable purposes, discarded, and in its stead an insignificant funnel is introduced, which can only serve to strangle and obstruct the free passage of the air, where freedom from obstruction is especially required. Such a scheme has only its parallel, in that other well-known scheme, of a certain ingenious individual, who, having a large hole through his door for the cat to creep through, added thereto in his sapience a smaller one by its side, for the egress of the kittens. It would be well, if Mr. S. would inform your readers, also, how he proposes to construct his furnace at surface, with reference to the supply of air to the fire—as judging only from the crude sketch given in your *Journal*, I fear an effect would be produced very similar to that pointed out, as likely to result from his first propounded scheme on this subject. Some fuller directions on this point are needed, and I trust will not be withheld.

Kilburne, near Derby, June 1.

THE BLACK DIAMOND.

BESSEMER'S IMPROVEMENTS IN RAILWAY CARRIAGES.

SIR.—I am highly pleased, and cordially agree, with Mr. Bessemer, on the propriety of either constructing the fronts of railway carriages of a pointed form, or of attaching moveable hoods for the same purpose—namely: that they may thereby cut their way through the air, and the extra expense will, no doubt, be soon amply repaid by saving coke. I also agree with him on the injury done to axles by contortion, produced by two fixed wheels of equal diameter running on curved lines; but, instead of making the axles in two parts, with a coupling-box in the middle, as he proposes, I would suggest that one wheel be made fast, as at present, at one end, and the other wheel, moveable on the other end of the axle, neatly fitted up on the patent plan. This arrangement would be found to effect the same object at a much less cost.—J. WALKINSHAW: Coleford, June 2.

RAILWAY CARRIAGE BREAKS.

SIR.—I consider Mr. Crawford deserves well of the public, for having attempted to prevent those appalling accidents which too frequently occur on railways, for want of the means to stop the trains instantly on approach of danger. This he proposes to do by a system of combined breaks; but as there appears to be great complexity, considerable expense, and some degree of uncertainty of safely connecting them to each carriage of the train, I would suggest, that skids, or slippers of iron, be attached to the hinder end of each engine, tender, and railway carriage—one or more of which may be forced down upon the rail with a screw, as occasion may require—which, in extreme cases, may be carried so far as to raise the hinder wheels off the rails. Now, as these slippers would be furnished with flanges, they would be equally safe as the wheels; and, by presenting a greater surface in close contact with the rails than the wheels could, though held fast from turning, so would they more immediately overcome the momentum, and, consequently, stop the train. The guard could screw down one where he chanced to be, and then proceed to another—while the stoker and driver would each have given full effect to those nearest to them, and then both fly to the assistance of the guard on the other carriages. Coleford, June 2.

J. WALKINSHAW.

ATMOSPHERIC RAILWAY.—CLARKE AND VARLEY'S.

SIR.—Having inspected Messrs. Clarke and Varley's experimental atmospheric railway at Blackwall, I beg to observe, that I consider it the most perfect and practicable atmospheric tube yet brought before the public, both for simplicity and cheapness—all the other atmospheric inventions must give way to this; and I do not hesitate to say that, with this system, railways might be constructed, at little more than half their present cost. One great advantage possessed by the atmospheric system over that of the locomotive, is that it can be worked by water-power; now, there are already several railways in Europe, running from 60 to 70 miles parallel with rivers, where the fall of water is very great, as, for instance, the Austrian Imperial Royal States Vienna and Trieste Railway—part of which is already opened from Mürzschlag to Grätz, a distance of 70 English miles—the line of railway and the River Mür both traversing the same beautiful valley to Grätz, in Stiermark. The fall of water between Mürzschlag (perhaps, will be better known as the Semmering Mountain) and Grätz is 1600 English feet. If Nature had designed this portion of the railway expressly for the atmospheric system, to be worked by water-power, it could not possibly be better arranged, there being a perpetual stream of water, and from 100 to 200-horse power obtainable in any part of the river throughout the whole 70 miles; all that is required would be the laying down the atmospheric apparatus, and great water-wheels to work the air-pumps: the above distance might be worked by the two great elements of Nature—atmospheric air and water—and so away with all the locomotive expenses. It is needless to remark, as it will be seen, that the railway gradients between Mürzschlag and Grätz are both heavy and expensive—two engines being required for a small train; the curves also are very small, some of them not more than 200 yards radius. I may, perhaps, here say, that the iron-works in Stiermark, belonging to his Imperial Highness the Archduke John of Austria, are all worked by water-power from the same stream, and that a great quantity of rails are yearly manufactured at these works. In November, 1845, I addressed a letter to the Minister of the Finances of Austria, pointing out its superior capabilities; and I have no doubt that, as soon as the advantages which would attend the adoption of Messrs. Clarke and Varley's system, in the instances named, become fully known, it will be well received in Austria, more especially when we take into consideration the high prices of fuel in that country. There are many other places similarly situated, in Prussia, Austria, Hungary, Tyrol, Germany, that I have travelled over, which are equally as advantageous—for instance, at the Meritza river, in Turkey, where the atmospheric apparatus could be laid down, and most effectually worked by water-power, and which would open a railway communication between Adrianople, Sophia, and Constantinople; this would be an excellent line of railway, plenty of every material for its construction. I and my companions performed this journey on horseback—a beautiful ride, with splendid scenery, but a little annoyed with the mosquitoes occasionally. I have no hesitation in adding, that as soon as this system is brought properly into action, every government in all parts of the world, will gladly adopt it, for the advantages it presents.—G. SHEPHERD, C.E.: London, June 3.

ATMOSPHERIC RAILWAYS.—PILBROW'S SYSTEM.

SIR.—Samuda's system of atmospheric traction having proved itself, beyond all doubt, a complete failure, and the hopes entertained of it, even by its most strenuous advocates, being entirely at an end, now is the time to look around, to see if there be any other system of that kind, which promises more favourable results, and, if so, to examine into its merits. We were led, some time since, to expect great things from Pilbrow's system, which, if it were to fulfil all that it promised to do, would meet and obviate the objection which has been the cause of failure in Samuda's—viz.: the long valve—*hinc ille lacryma*. How is it that Pilbrow's Atmospheric Company, who undertook to carry out the former method, should remain perfectly passive and inactive, and let so favourable a crisis as the present to pass, without taking any advantage of it. The merits of this plan ought now to be tested, and proved beyond all contradiction, for that the atmospheric system (as far as the public is concerned) is superior in principle, and may be proved so in practice—if we have it in its best form—is a fact which has been proved and established.—MONITOR: Shoreditch, May 29.

[We believe Pilbrow's Company is defiant, except that certain law suits are pending. We recommend our correspondent to go and see Clarke and Varley's resilient atmospheric railway, at work on the Blackwall line, Poplar station, every day, which is pronounced as perfectly successful, and is simplicity itself.]

MAPPIN'S IMPROVEMENTS IN ELECTRIC WIRES, &c.—These improvements consist in applying a tubular leaden covering to the wires. They are insulated by first covering them with cotton, and then applying a coat of any suitable melted material, after which they are enclosed in a leaden tube of such size, as will admit of the wires being readily drawn through it. The space around the wires is then filled with heated Stockholm tar and pitch, or other non-conducting material; and while the mixture is yet hot, and in a fluid state, the tube is placed in a jacket, or cylindrical vessel, heated by hot water, in order to keep the non-conducting material in a fluid state, until the leaden tube has been reduced to the desired size, by passing it between three rollers, which have semicircular grooves, each one-eighth of an inch less than the previous one—during which operation the tube passes easily over the wires, which must be considerably longer than the tube, before it enters the rollers. The leaden tube is then to be protected by winding coir-rope round it, and then pass through a bath of hot pitch; and then, while the pitch is hot, through a trough, filled with fine sand, which is to be well rubbed in, and which fills up the interstices of the coir-rope. If to be laid underground, it may be still further protected, by placing it in a cast-iron pipe.

ANOTHER IMPROVED GAS BURNER.—M. E. A. Maceaud, of Paris, has taken out a patent in England for an improvement in the Argand gas burner. It consists in surrounding the lower part of the flame with a casing, having numerous minute apertures in it, or made of a suitable open tissue, through which all the air to support combustion, both that which passes upwards through the centre of the flame, and that which acts upon its exterior, is compelled to pass. By this arrangement no jets, or partial currents, of air can affect the flame, as the air is drawn by its action in minute streams from all parts of the circumference of the casing, and in its passage through the temperature is raised—so that the casing becomes a reservoir of hot air; and as the combustion is supported by the air from the reservoir, only a steady white flame is obtained.

RECENT AMERICAN PATENTS.

[From the *Journal of the Franklin Institute*.]

For an improvement in Pistons for Pumps, Steam-engines, &c., called the Rolling Segmental Frictionless Piston: D. Hindman, Brunswick, Medina county, Ohio, March 7.—This invention consists in substituting for the metallic, or other packing, and the hinged flap, the rolling of metallic or other hard substances on each other, by making the piston of three, four, or more triangular parts, turning on rounded edges along the outer faces of the triangles, the outer faces being made in the form of segments of cones, and rolling on each other when moved together in the same direction—all the segments being joined to one piston or connecting rod. The effect of their vibration will be similar to the working of a flag of a bellows.

Claim.—What I claim as my invention and desire to secure by letters patent, is a compound piston of three or more segments, rolling on each other as they vibrate together, each on a separate axis, along or near to the outer edge, substantially as herein described.

Process for procuring White Rosin and a pure White Spirit of Turpentine from raw Turpentine: Nicholas U. Chaffee, Charleston, South Carolina, March 14.—The patentee says—"The nature of my invention consists in the application of steam generated from water in a common boiler, and conducted by wood and metal pipes into a wood still containing gum, which causes the spirits to rise and pass through a metal condenser in a second wood still, and from thence to a worm, or condenser, from which is produced a pure white spirit of turpentine. After the spirit is off, the gum, or white rosin, is conducted into a metal vessel, under which a slow fire is kept, until the water is evaporated, when the rosin is transparent or crystallized."

Claim.—What I claim as my discovery, and desire to secure by letters patent, is the manufacturing of white rosin and white spirits of turpentine from the gum of pines, either dip or scrape, by the application of steam generated from water, in a common boiler or still, and conducting the spirits through a wood or metal pipe into a wood or metal still, mixing with the gum, and then passing through a metal heater, as herein described.

Improvements in Carriages: S. Fairchild, Trumbull, Connecticut, March 14.—Instead of the usual perch and elliptic springs, and the fifth wheel on the fore axle, the fifth wheel is placed midway between the two axles, and the half of semi-elliptic springs extend from the rear axle to the lower plate of the fifth wheel, and in like manner from the front axle to the other plate of the fifth wheel; and the frame of these plates is also attached to the middle of reversed elliptic springs, the ends of which are secured to the carriage body: the whole constituting the springs and perch.

Claim.—What I claim as my invention, and desire to secure by letters patent, is the combination of the fifth wheel and springs, and stays suspended between the axles under the bodies of carriages, in the manner and for the purpose herein set forth.

Improvement in the method of Transporting, Washing, and Separating Coal: John C. Brant, Cumberland, Maryland, March 14.—The broken coal is carried down an inclined shoot by a current of water, and this shoot is provided with branches and grates, so that the largest lumps, which are arrested by the first grate pass into the first branch: the next size in like manner, into the second branch; and so on, to the end; the water at the same time washing the coal, and carrying off the dirt and other impurities.

Claim.—What I claim as my invention, and desire to secure by letters patent, is conveying, washing, and separating coal simultaneously, by a current of water, in the manner above described, or other mode substantially the same.

Improvements in the Centrifugal Pump: W. D. Andrews, New York, March 14.—These improvements are applied to the rotary pump that acts on the water by centrifugal force, and their nature will be clearly understood by reference to the

Claim.—What I claim as my invention, and desire to secure by letters patent, is the combination of the following parts, as applicable to the raising of water and other fluids, either alone or with an admixture of sand, gravel, or other substances:—1. The ribs or other straight and rigid parts at right angles to other, not radiating, but proceeding from the corners of an enlargement, increasing in depth as they approach the shaft, or curved, proceeding from the centre, and increasing in depth as they approach the shaft. 2. The hollow cones inclosing the vanes and revolving with them.—3. The joint formed by the fillet attached to the short pipe connected with the lower half of the revolving case, working within the stationary pipe attached to the outer case.—4. The spiral passage of discharge constantly enlarging towards the exit.

Improvement in Fan Blowers: I. P. Smith, Orangeburg, Rockland county, New York, March 14.—Claim.—What I claim as my invention, and desire to secure by letters patent, is the combination of the various elements enumerated as entering into the construction and working of fan blowers, operated by auxiliary engines, for supplying the blast to the furnace of steam boilers; which elements consist of the increased diameter of the fan blower, and putting the fan directly on to the crank-shaft of the auxiliary engine; the combination of these two elements being essential to the end contemplated and attained by my improvement and invention, as above described.

Improvement in the Rotary Centrifugal Pump: W. H. Johnson, Springfield, Illinois, March 21.—This pump consists of two or more disks on a vertical shaft, working in a case formed with a compartment for each disk, by rings that extend inwards to within such a distance of the shaft as to leave a passage for the water. The lower face of each disk is provided with radial or curved ribs, or paddle plates, and the under surface of the rings or partitions of each compartment is armed with radial partitions or ribs. The ribs or paddle plates, by the rotation of the disks, act on the water and force it towards the periphery by centrifugal force, and then over the disk, towards the shaft. The same action then takes place at the next disk, and so on, until the water is discharged at the top.

Claim.—What I claim as my invention, and desire to secure by letters patent, is the combination of the circular revolving paddle plate with the cylindrical ring plates and radial partitions, constructed, arranged, and operated in manner and for purpose set forth.

[To be continued in next week's *Mining Journal*.]

THE ELECTRIC TELEGRAPH IN AMERICA.

[FROM OUR CORRESPONDENT.]

Lines of Electric Telegraph in Operation in the United States in 1847.	Miles
New York to Albany and Buffalo	150
New York to Philadelphia, Baltimore, and Washington	340
Washington to Fredericksburg, in Virginia	50
New York to Boston	250
Philadelphia to Pittsburgh	300
Buffalo and Lockport to Toronto, in Canada	130
Auburn, Ithaca, and Elmira	60
Syracuse and Oswego	35

Miles in operation Miles 1575

List of those under contract, and in process of construction.	Miles
Washington & New Orleans, from Fredericksburg to New Orleans	1122
Philadelphia to Pottsville	100
Montreal to Toronto	400
Boston to Portland	150
New Orleans, Cincinnati, and Columbus	1900
Buffalo and Milwaukee	700
Quebec and Halifax	700
Quebec to Montreal	180
Troy, in New York, to Montreal	183
Rochester to Danville	47
St. Louis to Medina	100
Hamilton (Canada) to Detroit	180

To be completed in 1848 Miles 4974

In operation now Miles 1875

In 1848—Total Miles 6849

THE ELECTRIC TELEGRAPH.

At a time like the present, when the electro-telegraphic means of communication is not only in constant service, but the subject of almost daily legal contention for patent right, the following transcription, from one of the letters in the *Spectator*, possesses some interest—not only to the parties concerned, but to the scientific public generally:—

Strada, in one of his *Prolusions* (Lib. II., Prolog.), gives an account of a chimerical correspondence between two friends, by the help of a certain loadstone, which had such virtue in it, that, if it touched two several needles, when one of the needles so touched began to move, the other, though at never so great a distance, moved at the same time, and in the same manner. He tells us, that the two friends, being each of them possessed of one of these needles, made a kind of dial-plate, inscribing it with the 24 letters in the same manner as the hours of the day are marked upon the ordinary dial-plate. They then fixed one of the needles on each of these plates, in a manner that it could move round without impediment, so as to touch any of the 24 letters. Upon their separating from one another into distant countries, they agreed to withdraw themselves punctually into their closets at a certain hour of the day, and to converse with one another, by means of this their invention.

Accordingly, when they were some hundreds of miles asunder, each of them shut himself up in his closet at the time appointed, and immediately cast his eye upon his dial-plate. If he had a mind to write any thing to his friend, he directed his needle to every letter that formed the words which he had occasion for—making a little pause at the end of every word, or sentence, to avoid confusion. The friend, in the meanwhile, saw his own sympathetic needle moving of itself to every letter which that of his correspondent pointed at. By this means, they talked together across a whole continent, and conveyed their thoughts to one another in an instant, over cities, mountains, seas, or deserts.

If Monsieur Scudery, or any other writer of romances, had introduced a necromancer, who is generally in the train of a knight-errand, making a present to two lovers of a couple of these above-mentioned needles, the reader would not have been a little pleased to have seen them corresponding with one another, when they were guarded by spies and watches, or separated by castles and adventures.

In the meanwhile, if ever this invention should be revived, or put in practice, I would propose, that, upon the lover's dial-plate, there should be written, not only the 24 letters, but several entire words, which have always a place in passionate epistles—as flames, darts, die, language, absence, Cupid, heart, eyes, hung, down, and the like. This would very much abridge the lover's pains in this way of writing a letter; as it would enable him to express the most useful and significant words with a single touch of the needle.—*Vide Spectator*, vol. III., No. 241.—Dated 6th of Dec., 1711.

"NOTHING NEW UNDER THE SUN."—A Greek manuscript (of the 6th century), has been discovered at Athens, which, besides a treatise on Byzantine painting, is said to contain an account of the daguerrotype process, and hints for the manufacture of gun-cotton. In this manuscript, the art of producing photographic pictures is called "Heliotype."

A SEVERE ATTACK OF RHEUMATISM CURED BY HOLLOWAY'S GREAT PEPPERMINT PILLS.—Mrs. Ballie, of Oban, had suffered, during the last two years, from frequent attacks of rheumatism, which left her in a state of great debility. At length the pains were most excruciating—neither medicine nor medical aid affording her relief until she used Holloway's pills and ointment, when these remedies effected an astonishing short space of time, and she was enabled to perform her usual duties. The pills and ointment are efficacious in cases of gout, contracted by cold, by irregular swellings, tumours, and unnatural enlargements; and numerous instances are recorded, wherein they have been used with the most complete success. Sold by all druggists; and at Professor Holloway's establishment, 344, Strand, London.

